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# ARMY LIFE ON THE FRONTIER

1865 - 1898

By EDWARD M. COFFMAN

The familiar strains of the National Anthem carry well over the vastness of the western plains as the disciplined files stand rigidly at present arms. It is Retreat and units throughout the army are observing this solemn formation. Commands ring out; a martial air blares forth; and the infantry and cavalry dressed in their brilliant blue uniforms pass in review.<sup>1</sup>

The small army thus continued its traditions throughout the period between the Civil War and Spanish War. It seemed as if its prime had passed with Lee's surrender. In the terrible fighting of that war men had rocketed to high ranks and commands, but when the war ended these same men lost their ranks and frequently were reduced to the command of companies. During the thirty-three year period most of the army was stationed on the frontier to protect settlers from the Indians. These years were filled with long "scouts" made by cavalry, large-scale campaigns, and general defense measures against Indian depredations. Though every movie-goer is familiar with this side of army life, the garrison life is less familiar and this phase of the soldier's life took up most of his time.

Some of these garrisons had been constructed before the war. Fort Leavenworth, Kansas, was erected as early as 1827 and had been a significant post in the ante-bellum

era. Fort Laramie, built originally as a fur trading post, had also become a military garrison in this period. Other posts were constructed as permanent establishments after the war. Fort Sill, for example, was a temporary camp (Camp Washita); however, in 1869 it was selected as the location of a permanent fort. In addition to these two broad classifications there were many posts which were built as permanent posts which were abandoned before 1898. Another category was the temporary camp which was hastily erected due to necessity and abandoned when its usefulness had ended.

When the authorities decided to erect a permanent post, if troops were not already there in temporary quarters, they were moved into the area and settled in tents or shacks. Sometimes civilian carpenters were brought out from the "States" to help in the construction work. When Fort Richardson, Texas, was being built in 1868, some 150 carpenters and masons were paid from \$3 to \$5 a day for their work while soldiers who were detailed as assistants in the work received forty cents a day in addition to their regular pay.<sup>2</sup>

Fort Robinson, Nebraska, was one of the posts constructed entirely by soldier labor. Homer W. Wheeler, one of the officers who

<sup>1</sup>Interview with Mansfield Robinson, a veteran of the 24th Infantry Regiment from 1889 to 1913, on April 8, 1955. He served on frontier posts from 1890 to 1898. Fritz Kredel and F. P. Todd, *Soldiers of the American Army, 1775-1954* (Chicago, 1954), plate 23. Small posts or temporary camps did not practice such elaborate formations, but invariably stood retreat.

<sup>2</sup>H. H. McConnell, *Five Years A Cavalryman or, Sketches of Regular Army Life on the Texas Frontier, Twenty Odd Years Ago* (Jacksboro, Texas, 1889), 159-160. The copy used is on microfilm in the University of Kentucky Library. A private's pay at this time was \$16 a month, out of which one dollar was deducted to put in savings for the soldier until the end of his enlistment and 12½¢ was sent to the Soldiers' Home Fund W. A. Ganoe, *The History of the United States Army* (New York, 1943), p. 302.



supervised the work, claimed that the only expense to the government was the money for "nails, strap-hinges for the doors, window sash and glass."<sup>3</sup> When Colonel Wheeler helped rebuild Fort Washakie, Wyoming, two civilians were hired, a sawyer and a carpenter.<sup>4</sup> The fact that troops were used for such duty led another officer to comment: "This 'labor of the troops' was a great thing. It made the poor wretch who enlisted under the vague notion that his admiring country needed his services to quell hostile Indians, suddenly find himself a brevet architect, carrying a hod and doing odd jobs."<sup>5</sup>

The construction of Camp Supply in Indian Territory during the Washita campaign (November 1868) is an example of how the troops were used in such work. The location for this post was made by a civilian guide. Once located the troops pitched tents and were organized into reliefs. While one detail moved into the woods to obtain the necessary logs, another detail remained at the site constructing the fort; meanwhile a strong guard stayed with each of these groups. Another group of men were utilized as teamsters to drive the teams hauling the logs. During the construction the soldiers were either working or on guard. Men who were skilled in carpentry received thirty-five cents a day while the laborers were paid twenty-five cents in addition to the regular salary.<sup>6</sup>

While Fort Phil Kearny was being erected in Nebraska under similar conditions in 1866, the party sent into the woods to chop down

trees was surprised by a large body of Indians. Hearing the firing, Brevet Lieutenant Colonel W. J. Fetterman led eighty-four officers and men to their aid. The Indians massacred the relief column. Such hazards were increased due to the soldier's lack of firepower because the infantryman was armed with a single-shot Springfield rifle. Since the Indians could fire arrows rapidly or used revolvers or repeating rifles, the troops were at a distinct disadvantage.<sup>7</sup>

In the Southwest log details gave way to quarry details as the men used stone and adobe to build the posts, although some forts did have wood buildings. At Fort Grant, Arizona, the incoming officer might find himself in one of three types of dwellings—adobe houses which had been originally used as kitchens when the post was built in 1857, "jacal" sheds which were upright logs, chinked with mud and roofed with smaller branches and more mud, and tents which had been condemned by the quartermaster.<sup>8</sup> Insects were particularly bad in the adobe buildings while the tent dweller had to become inured to wind and dust. The troops lived in adobe quarters.<sup>9</sup>

Contrary to the general conception of a frontier post, there was no log stockade. The average post consisted merely of a group of buildings without any protective entrenchment or stockade. The garrison might be composed of units of both infantry and cavalry or entirely of one arm. Generally from four to eight companies lived at a post.

The buildings were usually located on the sides of a parade ground quadrangle. The barracks would take up one side. Each long building would house an entire company as a rule, although some housed as many as three companies. Kitchens would be at the

<sup>3</sup>Homer W. Wheeler, *Buffalo Days: Forty Years in the Old West; The Personal Narrative of a Cattleman, Indian Fighter and Army Officer* (New York, 1923), p. 123.

<sup>4</sup>*Ibid.*, p. 211.

<sup>5</sup>John G. Bourke, *On the Border with Crook* (New York, 1891) p. 7.

<sup>6</sup>P. M. Ashburn, *A History of the Medical Department of the United States Army* (Boston, 1929), p. 98. This gives the account of Private H. Harbers. D. B. R. Keim, *Sheridan's Troopers on the Borders: A Winter Campaign on the Plains* (Philadelphia, 1885), pp. 104-105. Keim was a correspondent with the expedition.

<sup>7</sup>Ganoe, p. 310.

<sup>8</sup>Bourke, p. 5.

<sup>9</sup>Robinson was stationed at this post from April to August 1890. At that time it was considered a good post. Bourke was there in the 1870's.



rear and attached to the buildings in some forts. Interior plumbing was unknown. The barracks were heated by wood-burning stoves and lighted by gas lamps which hung from the ceiling. The men slept in iron bunks and kept their equipment in footlockers.<sup>10</sup>

Another side of the quadrangle would be taken up by the "officers' line" where the officers and their families lived. At times two families would have to double in these quarters, although usually one family was allotted a house to itself. Some posts had duplex frame houses which gave the two families a degree of privacy. Many houses had picket fences about them.<sup>11</sup> Most posts had frame buildings for officers' quarters. The wives would bring some furniture from the "States." If this did not suffice, army blankets and boxes were converted into makeshift pieces of furniture which were further supplemented by tables and chairs made by enlisted men who had some cabinet-making skill. Since the walls were bare and frequently in need of repair, the women resorted to various expedients to brighten their condition. At one Kansas post one wife papered the wall with copies of *The Army and Navy Journal*, with the illustrated pages of *Harper's Weekly* added for variety.

The kitchen was the bane of existence for one used to the comforts of an Eastern home. Many kitchens did not possess sinks. Water was obtained from barrels placed outside the back door. The drinking water barrel was emptied and refilled daily by a detail of soldiers who hauled the water from the nearest supply point, usually a nearby river. Another barrel contained water for cleaning purposes. Bathroom facilities were in a separate build-

ing to the rear of the quarters.

Added to the lack of conveniences was the fact that certain kinds of food—eggs, butter, etc.—were difficult to obtain at times. One saving factor was the cooperation of other families. In case a wife did not have enough furniture, utensils, or food for a particular function her neighbors would readily supply her need. Some of the army wives had civilian servants to cook and help keep the house. This source of help supplemented the enlisted men who did odd jobs about the house.

One fear which all families had was of being shifted to new quarters by the arrival of a ranking officer. This officer could force anyone below his rank to give up his quarters if he so desired. This could lead to a chain reaction until the lowest ranking officer would be left without a residence; however, arrangements were generally worked out so that people would not be too inconvenienced.<sup>12</sup>

Other buildings were grouped either on the quadrangle or behind the "officers' line" or barracks. The administration building, which contained post headquarters and the adjutant's office, was on the quadrangle, as were the commissary and guard house as a rule. The buildings or tents used as storage places for quartermaster supplies were sometimes on the quadrangle also, but corrals were usually some distance away.

The hospital was another building located either on the quadrangle or to the rear of the other buildings. Medical facilities were as primitive as the other remnants of civilization on the frontier. Doctors were either career army officers or civilians serving a tour as "contract surgeons." There was usu-

<sup>10</sup>Mansfield Robinson; Ashburn, p. 111; L. R. Hafen and F. M. Young, *Fort Laramie and the Pageant of the West, 1834-1890* (Glendale, California, 1938), p. 399. Most of the sources used in the preparation of this paper also have descriptions of posts.

<sup>11</sup>Interview with Mrs. George B. Duncan, widow of Major General Duncan, who spent over a year at Fort Sherman, Idaho, in the 1890's, on September 1, 1955.

<sup>12</sup>The information about officers' quarters came from these sources: Elizabeth B. Custer, *Following the Guidon* (New York, 1890), pp. 226-230, 239-247, 252-255; Anson Mills, *My Story* (Washington, D. C., 1918, p. 149; Mrs. Duncan. Mrs. Custer is the most detailed source; however, it must be remembered that her experience came in the decade following the war and that she was the wife of a ranking officer.



ally one doctor at each post, and it was his responsibility not only to look after the health of the garrison and civilians who lived near the post but also to keep meteorological reports. The unlucky soldier who had trouble with his teeth had to take makeshift actions or wait until the dentist made his annual visit.

The doctors did have staff non-commissioned officers who were permanently attached to the Medical Corps as hospital stewards to help maintain the hospitals; however, it was difficult to obtain hospital attendants who were privates detailed from line companies. Although extra-duty pay was offered, most men did not desire this type of work; hence, the caliber of attendants was generally low.<sup>13</sup>

One doctor in this period left a description of the hospital at Fort Washakie, Wyoming, which he said was typical of hospitals on frontier posts. "The hospital was a log building chinked with mortar, of exceeding primitive architecture, 'built by the labor of troops.' It was . . . a long parallelogram of five rooms, a ward of 12 beds, an office, dispensary, kitchen and a store-room, heated by wood burning stoves, lighted by candles and ventilated by leaks in the chinking all around the windows. The water supply consisted of two or more pork barrels outside the kitchen."<sup>14</sup> At this hospital the doctor performed an operation on the mess table in the ward using candlelight on one occasion. This same doctor, W. H. Arthur, was transferred to Fort Douglas, Utah, where one of the finest hospitals on the frontier was located. This forty-bed hospital had a central hot-air heating plant, but lacked a laboratory, operating room, and indoor latrine.<sup>15</sup>

As part of his routine duty the post surgeon was required to make a sanitary inspection

tion of his station. Until 1885 these reports were turned over to the post commandant. Since bad reports would reflect on his ability, this officer would throw out such reports; however, after 1885 he was required to send them forward to higher headquarters.<sup>16</sup>

A part of the post which undoubtedly worried the conscientious doctor was "Suds Row" or "Sudsville" where the laundresses lived. Each company had several of these women, usually wives of enlisted men, to do their washing. Life was hard for these people, but they were tough enough to stand it generally. Occasionally the officer of the day would have to go into the area to break up fights among the women.<sup>17</sup>

Perhaps the brightest spot on the post for both officers and men (and their favorite loafing place) was the sutler's or post trader's store, usually located away from the quadrangle. The office of sutler was abolished shortly after the Civil War, but the store was still called the sutler's store in many cases. Here one could find groceries, dry goods, liquor, and billiard tables. At intervals the officers' wives would get up an order for things which could not be found at the store. The sutler or manager of the store would then send this East for them.<sup>18</sup> Fresh vegetables were usually supplied by the post garden which was maintained since the army ration issued did not include fresh vegetables.

The post cemetery was also located near the outskirts of the station. When many of these posts were abandoned, the cemeteries were transferred to permanent government establishments.

<sup>13</sup>*Ibid.*, pp. 119, 140.

<sup>17</sup>Elizabeth B. Custer, *Boots and Saddles, or Life in Dakota with General Custer* (New York, 1885), pp. 88, 92; W. S. Nye, *Carbine and Lance: The Story of Old Fort Sill* (Norman, Oklahoma, 1943), p. 281; Mansfield Robinson.

<sup>18</sup>Letters written by Peter Koch who worked in the sutler's store at Fort Ellis, Montana. Koch Collection, Louisiana State University Archives, typewritten copies in possession of Dr. Carl B. Cone, University of Kentucky; Mrs. Duncan; Hafen and Young, pp. 346, 349

<sup>13</sup>Ashburn, pp. 100, 117.

<sup>14</sup>*Ibid.*, p. 116.

<sup>15</sup>*Ibid.*, p. 118.



A problem faced by families was the education of the children. Some posts had schools with educated enlisted men as teachers. At other posts it was necessary to educate the child at home or send him away to school. Sometimes officers would combine and purchase the services of a governess, thus solving the problem until some young soldier disrupted school by marrying the lady. At Fort Ellis, Montana, in 1879 the post commandant reported: "I have endeavored to keep one school in operation at which children of officers were allowed to attend in the forenoon and the children of laundresses and soldiers in the afternoon. At present we have no school, our teacher having been discharged, and I have been unable to replace him, with a suitable enlisted man."<sup>19</sup>

The soldiers who served during the years immediately after the Civil War were mostly veterans. As time passed only a few oldsters remained of this group. Their places were filled with an assortment of immigrants (mostly Irish and German), farm and city boys. The average recruit joined because he found it difficult to get a civilian job. Once he had taken the oath, he was sent to a training station for his introduction to the army. At these places, such as Jefferson Barracks, Missouri, and Columbus Barracks, Ohio, the infantry recruit was drilled. The cavalry recruit was taught how to groom a horse in the regulation manner in addition to drill. After several weeks these men were sent out to their units in the West.<sup>20</sup>

When he joined a unit the soldier settled down to a monotonous existence. Since there

<sup>19</sup>Major J. W. S. Brisbin Report, Fort Ellis, Montana, January 31, 1879, Fort Ellis Letter Book, National Archives, Washington, D. C.—Microfilm in possession of Dr. Carl B. Cone, University of Kentucky; Interview with Mrs. Ray Wetherill Van Meter who lived on frontier posts in 1880's and 1890's on May 15, 1955 in Lexington, Kentucky. Her father was Captain Alexander M. Wetherill of the 6th Infantry.

<sup>20</sup>E. A. Brininstool, *Troopers with Custer: Historic Incidents of the Battle of the Little Big Horn* (Harrisburg, Pennsylvania, 1952), p. 39; Mansfield Robinson.

were too few on hand to conduct organized training, the men would spend their time drilling and working on fatigue or other details. If he were in the cavalry, additional time would be devoted to care of the horses. One schedule gives the day's work as follows: Reveille—sunrise; stable call—immediately after reveille; breakfast—6:00; sick call—6:30; fatigue—7:00; guard mount—8:30; first sergeant's call—11:00; recall from fatigue—11:30; dinner—12:00; fatigue—1:00; stables—4:00; recall—6:00; retreat—sunset; tattoo—8:30; taps—9:00.<sup>21</sup>

The monotony was sometimes broken by an extended campaign against the Indians. Cavalry patrols were sent out frequently from the forts to check on hostile activity. When the infantry did not take part in campaigns, they would go out on maneuvers which normally lasted a month. These practices consisted of marches and skirmish drills while based in bivouac. Target practice, often held in the spring, was another regular feature of army life.

Garrison life offered few amusements for troops. Some units held "field days" once a month when the units would compete against each other in races, tugs of war, and other athletic games. Cavalry units held horse races. A comic spirit was injected into this sport when it was decided to have a mule race at one post. Baseball was another favorite sport. During the 1890's baseball had become so popular that some regiments sponsored their teams against all comers. At Fort Union, New Mexico, lawn tennis was in vogue in the 1880's.

Shooting was a competitive sport throughout the army. In the 1890's the best shots from each company were sent to a grand match to compete with all army marksmen.

<sup>21</sup>General Orders #9, Fort Ellis, March 31, 1868. Fort Ellis Letter Book. Microfilm in possession of Dr. Cone. This schedule was probably varied. Supper was presumably held between Recall and Retreat at Ellis.



Hunting and fishing were allowed and frequently encouraged in suitable country. One officer purchased shotgun shells and supplied them to the best marksman in his company for hunting purposes. He also bought fishing rods for his men. The game and fish brought in by the men supplemented the army rations.<sup>22</sup>

Some posts organized dramatic societies which would produce home-talent shows or regular plays. At the home-talent shows the men with talent as clog dancers, acrobats, musicians, etc., would demonstrate it.<sup>23</sup> More frequently balls or hops were given. At that time the men stripped the barracks of furniture, decorated the bare hall, and held a dance. Music was furnished by a portion of the regimental band.<sup>24</sup> Naturally there was usually a shortage of women at these affairs, although settlers in the vicinity were included.

Despite the gaiety of a ball or the excitement of a show the most outstanding social function for the enlisted man was pay day. Theoretically the men were supposed to be paid every two months; however, the paymaster was unable to reach some of the more isolated posts more than twice a year. Such delays brought forth this bit of soldier verse;

"They say some disaster

Befell the paymaster;

On me conscience I think that

The money's not there."<sup>25</sup>

At times the authorities withheld pay purposely so that the men would not spend their money unwisely.<sup>26</sup> As soon as the paymaster

had done his duty the men fell into a characteristic pattern. Habitual drunkards headed for the sutler's and a drunken orgy. The gamblers immediately started their card and dice games. Others turned their salaries into sutler's food to feast on non-issue rations until their money was exhausted. A rare group saved their money. For the next day or two the officers were occupied with rounding up their drunken charges and getting them sobered up for duty. Within a short period cash had disappeared from the station, and once again the sutler operated on a credit basis and the men used pieces of tobacco or cartridges as a medium of exchange.<sup>27</sup>

Pay day was the zenith of drunkenness at the frontier posts. A sutlers' clerk at Fort Ellis, Montana, left this description of pay day highjinks: "Yesterday was a perfect pandemonium in the saloon, it was crowded all the time, everybody drunk and trying to outtalk everybody else. Every few minutes somebody would get knocked down, and occasionally they were having a free fight that shook the whole house. When it got too bad the officer of the guard would send down a squad of men and march the worst ones away to the guard house."<sup>28</sup> Where there were small villages nearby, the soldiers found their drunken pleasure in the inevitable saloons. At such places friction frequently sparked trouble between civilians and soldiers which sometimes resulted in a "clean out" party that sounded like a regular skirmish with its shooting.<sup>29</sup>

Obviously, observing a pay day celebration would not give an onlooker the best impression of the army. One West Point "shavetail" arrived at his first duty station

<sup>22</sup>Mansfield Robinson; Mrs. Duncan; Bourke, p. 330. Bourke points out that in the Black Hills both officers and men hunted and fished. F. Stanley, *Fort Union* (N. M.) (n.p., 1953), p. 219.

<sup>23</sup>Custer, *Boots and Saddles*, p. 90; Mills, p. 165; Mrs. Duncan.

<sup>24</sup>Mansfield Robinson; Custer, *Boots and Saddles*, p. 94; McConnell, p. 163.

<sup>25</sup>McConnell, p. 156.

<sup>26</sup>Marguerite Merington (editor), *The Custer Story: The Life and Intimate Letters of General George A. Custer and His Wife Elizabeth* (New York, 1950), p. 296.

<sup>27</sup>McConnell, pp. 156-8; Custer, *Following the Guidon*, p. 286; Bourke, p. 21. Incidentally it was illegal to use cartridges for bartering purposes.

<sup>28</sup>Peter Koch to Cousin Laurie, Fort Ellis, February 21, 1871.

<sup>29</sup>Custer, *Following the Guidon*, p. 155.



to find the entire garrison participating in a drunken orgy following pay call. This continued for five or six days, with guard mount and roll call being the only formations held. At the time the young officer wished that he had turned down his commission and taken up a civilian career.<sup>30</sup>

Such uproarious conduct as the pay day affairs was bound to find retribution. Army justice was swift and often brutal, although at least one enlisted man later asserted that it was fair.<sup>31</sup> Courts-martial were sometimes informal. One major at a Texas post would hold garrison court (for minor offenses), pass judgment, and mete out punishment while seated under a tree as he attended to such domestic tasks as holding his baby or repairing equipment.<sup>32</sup> Punishments ranged from fines for drunkenness to more brutal measures. Walking in front of the guardhouse carrying a log on his shoulder all day long or working in leg irons were punishments that a drunk soldier might expect. At Fort Ellis soldiers were punished for drunkenness by being hanged by their thumbs, spread-eagled on the ground, or bucked and gagged (the soldier's arms were bound around his knees which were held in place by a stick pushed under the knees and over the arms while another stick was tied into his mouth).<sup>33</sup> These were extreme measures used in the more obnoxious cases. Fines (which accrued to The Soldiers' Home) were used to punish most of the offenders.

There were many other unusual punishments. Drunks were sometimes sobered up by being thrown into nearby rivers or spread-eagled on a caisson wheel. The log carrying

(thirty pounds was the usual weight of the log<sup>34</sup>) seemed to be a widespread practice. One officer thought of a punishment which would serve as a humiliating agency: "Instead of punishing the men by confining them in the guardhouse for trial, I had the post carpenter construct a very unprepossessing wooden horse and a wooden sword about six feet long, with its business end painted a bloody red. Any man reported for any disorderly conduct . . . had to ride this horse for a certain period, dismounting occasionally to curry and water it with curry comb and water bucket."<sup>35</sup>

Flogging was supposed to be used for punishing deserters in the years following the Civil War. Evidently it was rarely resorted to, although Custer used it not only for desertion but also for punishing men who committed depredations on civilians in 1865 on the Texas frontier.<sup>36</sup> The deserter was also punished by being charged for the missing government property in his company which enabled his company commander to make up shortages.<sup>37</sup> Desertion was a problem in the army. Custer took extreme measures on a campaign in 1867 when thirty-five men deserted within twenty-four hours. He dispatched a detail after them with orders to bring back as many as possible dead. When several bodies were brought back, desertion was curbed.<sup>38</sup>

Another unusual punishment was having the undesirable soldier drummed out of camp. This meant shaving the man's head and marching him in front of drummers past the troops in formation.<sup>39</sup> Such punishments were probably the exception rather than the rule by the 1890's. A veteran of that period

<sup>30</sup>George B. Duncan, "Memoirs." There is a copy of this unpublished work in the University of Kentucky Library. Major General Duncan graduated from the Military Academy in 1886 and reported at Fort Wingate, New Mexico, soon after his commissioning.

<sup>31</sup>McConnell, p. 58.

<sup>32</sup>*Ibid.*, p. 198.

<sup>33</sup>Peter Koch to Cousin Laurie, Fort Ellis, February 21, 1871.

<sup>34</sup>R. G. Carter, *The Old Sergeant's Story: Winning the West from the Indians and Bad Men in 1870 to 1876* (New York, 1926), p. 20.

<sup>35</sup>Mills, p. 109.

<sup>36</sup>Merrington, p. 172.

<sup>37</sup>McConnell, p. 135.

<sup>38</sup>Merrington, p. 205.

<sup>39</sup>Custer, *Following the Guidon*, p. 312.



remembered that men were usually punished by being confined to quarters and then fined or sent to the guardhouse to work on police details (cleaning up the post area) during the day.<sup>40</sup>

The officers who controlled life on the posts were an interesting group. In the years immediately following the Civil War most of them were veterans, many having taken demotions in order to stay in the service. Custer, for example, was a major general of volunteers and a division commander during the war, but he died as a lieutenant colonel, second in command of a regiment. Such officers retained the right to wear the insignia (off duty) and bear the title of their brevet rank, but they received the command, pay, and emoluments corresponding to their active rank.

Naturally there was extreme interest in promotions among the officers. The days of rapid advances had ended with Appomattox. Officers of all ranks could look forward to years in their present grades. General Custer's wife wrote that as soon as word reached a post of an officer's death somewhere else, the officers would start checking immediately to see who would be promoted to fill the vacancy.<sup>41</sup> Obviously as the years passed not all the officers were Civil War veterans. Every year there was a group of West Point graduates and men appointed to direct commissions to join the ranks of second lieutenants. Nevertheless, Civil War veterans remained as ranking officers until the turn of the century and even after in some cases.<sup>42</sup>

When the officers were in garrison their duties consisted of maintaining discipline, sitting on courts-martial, inspecting quarters, and seeing that the men performed their rou-

tine assignments. Reports vary as to how well the officers performed their jobs.

Some of the officers shared the bad habits of the enlisted men previously referred to. There are several reported instances of officers suffering from delirium tremens. One colonel shot himself while having a delirium tremens fit.<sup>43</sup> Drunkenness had its more amusing results, however, such as as the time a young officer was making his obligatory courtesy call at the Custers'. When Mrs. Custer opened the door, the drunken man collapsed at her feet.<sup>44</sup>

A favorite resort for officers who drank was the sutler's. At Fort Ellis the sutler's clerk wrote that nearly all of the officers spent most of their time in his place of business, killing time by drinking and playing cards.<sup>45</sup> Of course many officers did not lose themselves in drunkenness. Some spent their leisure reading in a wide variety of subjects. At Fort Grant Captain John G. Bourke and a few of his friends dug into Indian ruins. Others went swimming or hunting at posts located in terrain which would permit such activity.<sup>46</sup>

Just after the Union Pacific Railroad was completed passes were given to army officers and their families on the frontier. This gave them the opportunity to travel as much as 350 miles to other posts for social functions. Such trips were highlights in the lives of these people.<sup>47</sup>

One distinct advantage of the officer's position was that most of them had their wives and families, in contrast to the loneliness of the average soldier. The army wives added greatly to their husbands' comfort by making a home out of their sometimes primitive materials. At times there would be only one

<sup>40</sup>Mansfield Robinson.

<sup>41</sup>Custer, *Following the Guidon*, p. 312.

<sup>42</sup>Mrs Duncan remembered that one of her husband's friends retired as a captain at the age of sixty-four.

<sup>43</sup>Merington, p. 204.

<sup>44</sup>*Ibid.*, p. 192.

<sup>45</sup>Peter Koch to Laurie, Fort Ellis, January 31, 1871.

<sup>46</sup>Bourke, p. 21; Mrs. Duncan.

<sup>47</sup>Mills, p. 125.



woman at a garrison, then the men would go out of their way to pay homage to her sex by bringing her gifts.

For the children army life amidst the frontier surroundings provided the "most wonderful time any children could ever have." As a rule there were only a half-dozen or so at the small posts. They would spend nearly all of their waking hours playing in the outdoors. The daughter of a captain in the 6th Infantry remembered that her mother would bundle her up in a Dakota winter and send her out to play. Indulgent fathers taught their children to ride. Picnics and children's hops were provided for entertainment at Fort Leavenworth. To a child army life seemed very gay.<sup>48</sup>

Although there were domesticating influences at the frontier posts, there was rarely much religious emphasis. Not all of the posts had chaplains, hence Sundays were either observed as days of rest or not at all. Where there were no ministers available the adjutants performed such services as marriages and funerals. Sometimes the wives would have hymn-sings or hold prayer book services on Sundays. At one post which had a chaplain troops were marched to services.<sup>49</sup> Religion probably became more thought provoking upon the death of one of the soldiers. Frequently the entire garrison would turn out for the service which would be held with

traditional military ceremony. Funerals reminded the men of the isolation and loneliness of frontier life.

An indication of the isolation feeling was the eagerness with which any stranger from the East was besieged with questions. Mail was an uncertain quantity due to both the distances and the hostile Indians; however, by the 1890's mail was received at more frequent and regular intervals.

Holidays were pleasant breaks in the monotony of frontier life. Christmas was celebrated with parties while Thanksgiving brought its traditional feast. The Fourth of July was made glorious by various athletic events. Hops usually served as the climaxes to all holidays.

When the Spanish War began the Indian Wars had already ended and the army was living a garrison-type existence. Since the Indians were no longer a great problem, many of the posts which had been built under such difficult conditions were abandoned. Others, such as Forts Sill, Riley, and Leavenworth, were maintained and are still being utilized today. Despite the inevitable changes garrison life in the modern army would not be an altogether strange existence to a soldier of the 1865-1898 period. H. H. McConnell who served in the Sixth Cavalry on the Texas frontier summed up garrison life in these words: "... human nature in the army or out of it is about the same, but in a military command it is a little more condensed as it were, and a greater variety of the lights and shadows thrown into a smaller space than in civil life."<sup>50</sup>

<sup>48</sup>The source for this paragraph and the quotation is Mrs. May Wetherill VanMeter who lived at Forts Buford and Stevenson in the Dakota Territory, Fort Douglas, Utah, and Fort Leavenworth, Kansas, before the Spanish War.

<sup>49</sup>Mansfield Robinson. Whether or not the marching of troops to services was a widespread practice is not known.

<sup>50</sup>McConnell, p. 110.



# AIR ARM DOCTRINAL ROOTS, 1917-1918

BY THOMAS H. GREER\*

As a preparation for the major role it was to play in World War II, the American air arm found its experience in the first World War was brief and limited. That war had an important bearing, however, upon the development of air doctrine in the interval between wars, because it was the only actual combat test to which American airmen and equipment had been put. Theories and practice maneuvers might be worked out in the light of later trends in technology and methods of warfare, but one fact always remained: the only battle test up to 1941 had been the action in World War I. Naturally, the conclusions drawn from that action gave initial direction to thought about the employment of airpower and continued during the following years to exercise a substantial though declining, influence upon it.

## PREWAR ORGANIZATION AND CONCEPTS

The American air arm was an infant in almost every respect when it was called upon to meet the challenge of World War I. Established by military order as the Aviation Section of the Signal Corps in August 1907, it had not achieved statutory recognition as such until July 1914, shortly before the outbreak of war in Europe.<sup>1</sup> Before and after that time there was agitation to raise the air arm to the status of a separate branch of the Army, but this movement did not meet with

success until June 1920.<sup>2</sup> In the prewar years and during the conflict itself, American airpower was the "baby" of the Signal Corps.

The question of the proper place and organization of the air arm was, in fact, the most discussed problem relating to military aviation during the prewar years. Before 1914 little was heard of types of planes and tactics, but a great row had already started concerning organization. The subject of this argument was, of course, a matter of military doctrine; for organization relates to the control and purposes of any military component. The intimate connection between concepts of the use of aviation and the manner of its organization may clearly be seen in the early debates upon the issue.

One might have suspected that agitation to make aviation a separate branch would have begun among the airmen themselves. It was from the outside, however, that such proposals were first made. Rep. James Hay, chairman of the House Committee on Military Affairs, in February 1913 proposed a bill which would have created a separate Air Corps as one of the line components of the Army. But legislative hearings and correspondence relating to the bill showed that most military men, including flyers, were opposed to it at the time. Assistant Secretary of War Henry S. Breckenridge saw military aviation as "merely an added means of communication, observation and reconnaissance," which "ought to be coordinated with and subordinated to the general service of information and not erected into an independent and uncoordinated service." Breckenridge em-

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<sup>1</sup>R. Earl McClendon, Air University Documentary Research Study, The Question of Autonomy for the U.S. Air Arm, 1907-1945, I, 1, 6-7 [hereinafter cited McClendon Study].

<sup>2</sup>*Ibid.*, I, 99-100.



phasized the point that aviation was still in its infancy, that it was destined for a long time to be an auxiliary of the line, and that its immediate future would therefore best be handled by the Signal Corps.<sup>3</sup> Col. George P. Scriven, Acting Chief Signal Officer, upheld this view. He also stressed the fact that the Signal Corps had the technical information and qualified personnel to handle aviation needs—in his view aviators were young men without the requisite scientific knowledge and mature judgment.<sup>4</sup>

Although many flyers resented this sort of reference to them, they appeared virtually unanimous in their opposition to the Hay bill. Outspoken were such future leaders of American airpower as Benjamin D. Foulois, Henry H. Arnold, and William Mitchell. Lieutenant Foulois thought it was too early for a separate Air Corps, but conceded that separation was only a matter of time. Lieutenant Arnold felt that since the Signal Corps was doing all it could for aviation, the situation was satisfactory. Captain Mitchell went so far as to assert that creation of a separate branch would retard the development of aviation as a branch of reconnaissance. In fact, there is only one officer on record in favor of the Hay bill. He was Capt. Paul Beck, who insisted that aviation was not logically a part of the Signal Corps since of its four functions, reconnaissance, fire control, aggressive action, and transportation, only one pertained to signals. He disagreed with the contention that separation should be postponed, charging that the longer the Signal Corps controlled aeronautics, the smaller would be the possibility that aviation would ever come into its own.<sup>5</sup>

The attitude of Captain Beck toward con-

trol by the Signal Corps foreshadowed a widening rift between the aviators and their nonflying military superiors. This personnel friction was at least as important as theoretical differences in bringing about eventual separation of the air arm from the Signal Corps. The basis for the difficulty seemed to lie in the special restrictions placed on flying officers with respect to age and marital status. The aviators resented such treatment and also chafed under what they regarded as the apathetic attitude of the Chief Signal Officer and the General Staff toward military aviation. The "high brass," for its part, found the aviators too outspoken and too indifferent toward conventional military customs. As the Chief Signal Officer, Brig. Gen. George P. Scriven, explained in February 1916, the trouble stemmed from the "aviation officers . . . unbalanced as to grades, young in years and service, and deficient in discipline and the proper knowledge of the customs of the service and the duties of an officer." Scriven imputed further that there was deliberate motive behind the friction which had been created. Behind their "unmilitary, insubordinate, and disloyal acts," he charged, was a burning ambition to set up a new and independent organization for aviation.<sup>6</sup>

The growing personal bitterness and the rising demand for separation of the air arm from the Signal Corps compelled the attention of Secretary of War Newton D. Baker, who in April 1916 directed the General Staff to launch a thorough investigation of the matter. At the same time he took special notice of the impatient attitude of the youthful aviators toward their nonflying superiors. Baker contended that what was needed was not a separate service, not a new corps but a new man in command—a man of mature and severe judgment, who could restrain with

<sup>3</sup>*Ibid.*, I, 33, citing ltr., Breckenridge to Col. Geo. P. Scriven, 7 Aug. 1913, and 63 Cong. 1 Sess., H.R. *Hearings on H.R. 5304*, pp. 22-23.

<sup>4</sup>*Ibid.*, I, 34, citing *Hearings on H.R. 5304*, pp. 6-9.

<sup>5</sup>*Ibid.*, I, 35-37, citing *Hearings on H.R. 5304*, pp. 38-40, 50-53, 76-85, 89.

<sup>6</sup>*Ibid.*, I, 40, 43-44, citing 3d ind. (basic unknown), CSigO to AG, Feb. 1916.

discipline the exuberance of youth.<sup>7</sup> Secretary Baker apparently had such a man in mind, for in February of the following year he appointed Brig. Gen. George O. Squier to replace General Scriven as Chief Signal Officer.<sup>8</sup>

The change in commanding generals represented no solution to the underlying problem. Secretary Baker himself admitted, in the same month in which he ordered the investigation of military aeronautics, that the experience of World War I showed that the air arm was no mere auxiliary service. Aviation was capable of action as an offensive arm, in addition to its function of scouting, carrying messages, and controlling gunfire. In the near future, he predicted, the United States would add armored and armed planes to its air fleet, and this development required the creation of a new fighting arm. Specifically, the time had come for a change in the relation of the Aviation Section to the Army. But Secretary Baker made no move for immediate change, and the initiative once more was left to Congress. In March 1916 Representative Charles Lieb of Indiana had already gone beyond earlier proposals for a separate aviation branch of the Army, by introducing the first of a long series of bills providing for a wholly autonomous Department of Aviation.<sup>9</sup>

The acrimonious debate over organization between old-line ground officers and the impatient flyers reflected an equally sharp divergence of view with respect to the functions of military aviation. Since, before the United States entrance into World War I, American airpower was hardly more than a wish, these differences could not assume very con-

crete form and were, indeed, more speculative than factual. The ground officer point of view, related to the actual planes and operations of the Aviation Section before 1917, saw military flying as an extension of the traditional means of communication and observation. As one veteran infantry officer put it thirty-five years later, "We first discovered that airplanes could go faster and higher than horses." They took over reconnaissance from the cavalry.<sup>10</sup>

The flying officer, on the other hand, looked beyond the machines at hand toward the potentialities of airpower. For example, between 1910 and 1914 aviators conducted a number of experiments designed to develop the military value of the airplane. Lt. Paul Beck early experimented with dropping bombs from an aircraft, and by October 1911 the first American bombsight and bomb dropping device, invented by Riley E. Scott, had been tested; Lt. Jacob E. Fickel experimented with firing a rifle at a ground target from an airplane, and Capt. Charles DeF. Chandler and Lt. Thomas DeW. Milling went a step farther by firing a Lewis machine gun from a plane; aerial photographs were taken; and two-way radio telegraphy between an airplane and the ground was demonstrated by Lts. H. A. Dargue and J. O. Mauborgne. Speaking also some thirty-five years later, General Milling asserted that the pioneer flyers had seen the true role of aviation even while their equipment was still in the "egg crate" stage. Milling held that almost from the beginning the airplane was seen not only as a means of observation and liaison, but as a striking arm against forces in the field and supporting facilities to the rear. "Our doctrine," said Milling, one of the earliest men to fly for the Army, "has been consistent since 1913, within the limits of our equipment."<sup>11</sup>

<sup>7</sup>*Ibid.*, I, 45-46, citing 64 Cong. 1 Sess., H.R. *Hearings on Army Approp. Bill*, 1917, pp. 838-40.

<sup>8</sup>General Services Administration, National Archives, "Preliminary Inventory of the Records of the Army Air Forces" (Washington, 1950), List of Commanding Generals of Air Arm.

<sup>9</sup>McClendon Study, I, 46-48.

<sup>10</sup>Interview by author with Col. Marshall H. Quesenberry, Ret., 22 July 1952.

<sup>11</sup>Interview by author with Brig. Gen. Thomas D. Milling, Ret., 4 June 1952.



## AMERICAN PARTICIPATION IN WORLD WAR I

*General concepts of warfare and air employment*

When America joined the war against the Central Powers in 1917, the divergent points of view between the ground and air leaders were carried from the field of theory to the field of action. This transfer tended to strengthen the influence of the ground officers, because the war had to be fought with available, not potential weapons, and because the battle on the Western front had already become frozen in a complex pattern of ground operations. For the most part, American forces had to fit into that pattern; they had neither the manpower nor the equipment to alter the fundamental nature of the struggle. It was a struggle of infantry, trenches, and artillery; of attack and counterattack; of attrition and reinforcement. It is no wonder that the high command regarded air operations as an adjunct to the mighty ground forces which had been committed to the mortal and decisive combat.

During the course of World War I American aviators saw the possibilities of a different kind of war and a more effective use of airpower. The great majority of those flyers, however, held junior rank in the Army, and their voices carried little weight in the superior councils of war. So long as air warfare was controlled by ground officers, there was slight chance that airplanes could be used for other than direct ground support. Gen. John J. Pershing, commander of the AEF, summed up the situation in his memoirs many years afterward. He referred to the tendency of the fliers to attach "too much importance" to missions behind enemy lines for the purpose of interrupting communications. Pershing asserted that "this was of secondary importance during the battle, as aviators were then expected to assist our

ground troops. In other words, they were to drive off hostile airplanes and procure for the infantry and artillery information concerning the enemy's movements." Best results were not obtained, he concluded, until aviators were required to serve a while with the infantry in order to get its point of view; coordination of effort was also improved by assigning selected ground officers to fly missions with pilots. The general admitted that the primary aim of military aviation was control of the air, but the ultimate objective remained traditional: "Once in command of the air," Pershing wrote, "the enemy's artillery and ground troops became the object of their attacks."<sup>12</sup>

When air officers expressed the view that the true objective of war might be the enemy's national will and productive capacity, rather than armies in the field, they were sharply corrected by their military superiors. When late in the war the Air Service, in cooperation with the British, undertook preparations for independent bombing missions, the high command took fearful and suspicious notice. Maj. Gen. J. W. McAndrew, Pershing's chief of staff, accordingly admonished Maj. Gen. Mason M. Patrick, chief of Air Service. He approved in principle the proposal for cooperation with the British, but he insisted that the bombardment units must in any case remain an integral part of the AEF. McAndrew emphasized that it was especially important that the higher officers in bombardment be impressed with the necessity for concentration of effort in each arm and for the coordination of all efforts toward a common tactical end. He directed that these officers be warned against any idea of independence, and that they be taught from the beginning that their efforts must be closely linked with operations of the

<sup>12</sup>John J. Pershing, *My Experiences in the World War* (New York, 1931), II, 337.

ground army. It should be thoroughly understood, McAndrew concluded, that whenever ground operations reached a crucial point, his headquarters would designate the regions to be bombed. Selection of targets during that time would depend solely upon their importance to actual and projected ground operations.<sup>13</sup>

While individual air officers had strong opinions about what they might do if given adequate support and equipment, they did not go into the war with any substantial doctrine of airpower. General Arnold later admitted frankly that in 1917 the American air arm

had no theories of aerial combat, or of any air operations except armed reconnaissance. Despite Billy Mitchell's eagerness to blow up Germany, we hadn't a single bomber. Such things as formation flying, a new German development appearing on the Western front that spring, were unknown to us. . . . Our first projected task was to provide every two ground divisions with one squadron of aerial reconnaissance and one balloon company. For the moment, a complete lack of combat experience had left American aviation behind.<sup>14</sup>

By way of contrast, General Arnold pointed out that, when the United States entered World War II, the air arm "had some solid theories of its own, even if they had been tested only in peacetime and by observation on the battle fronts abroad."<sup>15</sup> In 1917 there were notions of airpower, but no coherent formulation. And even those notions, although they included the concept of independent striking forces, were geared to the primary idea of aiding the field armies.<sup>16</sup>

### *Over-all air operations, organization, and control*

The actual extent of America's air participation in World War I is worth noting. The number of personnel engaged overseas rose from a negligible quantity in 1917 to a substantial figure by 11 November 1918: 6,861 Air Service officers and 51,229 men. Forty-five squadrons were serving with the various field armies, and to these units at the time of the armistice were assigned 767 pilots and 740 airplanes. The combat record of the Air Service, AEF, included 781 enemy craft shot down, 150 bombing raids, and a total weight of 275,000 pounds of bombs dropped.<sup>16a</sup> In addition to this record, American flyers performed thousands of individual missions in close support of infantry, on reconnaissance, and for adjustment of artillery fire.<sup>17</sup>

Organized as integral parts of the larger ground units—divisions, corps, armies, and the GHQ Reserve—all air elements overseas were therefore commanded, in the full sense of the word, by the leaders of those units. Although the subordinate Air Service commanders might suggest missions and were responsible for execution of designated air operations, final decision rested with the higher unit commanders, who invariably were ground officers. Even air units in the GHQ Reserve were thought of, not as an independent striking force, but as a pool for reinforcement of corps and army aviation, as required by the tactical situation.<sup>18</sup> This organization reflected the ground officers' view of the function of the air arm as auxiliary to the land battle.

<sup>13</sup>1st ind. (memo for C/S GHQ AEF from C/AS, 29 May 1918), C/S to C/AS, 18 June 1918, included in *Air Service History, American Expeditionary Force*, Series B, VI, in World War I Orgn. Records, Air Serv. Hist. Records, Natl. Archives, Wash., D. C.

<sup>14</sup>Henry H. Arnold, *Global Mission* (New York, 1949), p. 52.

<sup>15</sup>*Ibid.*

<sup>16</sup>Milling interview, cited in n. 11.

<sup>16a</sup>This figure may be compared with the 20,000,000 pounds dropped during the single "Big Week" (20-25 February 1944) of World War II. (See *The Army Air Forces in World War II*, III [Chicago, 1951], 43.)

<sup>17</sup>Mason M. Patrick, *The United States in the Air* (New York, 1928), pp. 49-50.

<sup>18</sup>Air Service, *Final Report of the Chief of the Air Service, A.E.F.* (Washington, 1921), p. 37.



The air leaders, who were convinced of the need to employ air units as a concentrated force, opposed the permanent assignment of units to the various ground commands. They favored the greatest possible concentration of air striking forces, under direct control of an air officer, for whatever missions might be required by superior authority. It was the Germans who first effectively demonstrated what massed airpower could do. During their offensive of March 1918, they concentrated some 300 aircraft for direct support of the ground advance. After careful preparation and detailed practice maneuvers behind their own lines, the German attack planes were thrown against Allied positions in the opening days of the assault. Control of the air having been quickly gained, they were able to harass the movement of troops with virtually no interference. The tide of advantage was not reversed until the Allies, in turn, concentrated a large number of planes in the sector and by relentless counter-air action regained control. According to American observers, the Allies in this case had demonstrated two fundamentally correct principles: concentration of force and the priority of counter-air action.<sup>19</sup>

General Mitchell was one of the strongest exponents of those two principles, and as Air Service commander, First Army, he was able to put them into practice in France, where his work at St.-Mihiel and the Argonne were landmarks in the development of airpower and the doctrine of employment. Mitchell's writings contain full accounts of the preparation and execution of air action in those battles; in both instances he was able to concentrate units from various ground commands into a powerful unified force. The first action, at St.-Mihiel in September 1918, was part of Pershing's plan to eliminate a

German salient so that a subsequent drive might be launched against the enemy's pivot (the Meuse-Argonne line). The American First Army was assigned the ground task, and Mitchell was given responsibility for gaining the necessary air control. Although the air operation was controlled by him and the staff of the Air Service of the First Army, Mitchell reported directly to Pershing (in nearby headquarters) and commanded an air force much larger than that of the First Army alone—he had requested and had received the greatest aeronautical contingent ever furnished to a single command up to that time. Obtaining such strength had not been easy, for he had to meet the resistance of ground commanders who wanted the air units elsewhere. As Mitchell put it, "As is usual under these conditions, every objection has to be overcome, and every reason has to be advanced as to the necessity for such things as distinguished from the concentration of maximum force in another place."<sup>20</sup>

Marshal Foch, as well as Pershing, approved Mitchell's recommendations, which involved French, British, Italian, and American air units. Some 1,500 aircraft of various types were brought under his direction—corps and army observation, army artillery, pursuit, day and night bombardment, and reconnaissance. The logistical and communications problem presented by this mighty array was unprecedented, but the job was done, and operational plans were drawn up by Mitchell's staff. The plan was both simple and significant as a forerunner of the means for control and employment ultimately adopted for American tactical aviation. It assigned to the troops only what aviation they needed for their own operations—corps observation squadrons with protecting pursuit. All the rest, which constituted the great bulk of the total, was put in a central mass, which was

<sup>19</sup>Maj. Ralph F. Stearley, ACTS lecture, History, Development, Organization, Training, 3 Jan. 1939, pp. 8-10, in USAFHD 248.2208B-1.

<sup>20</sup>William Mitchell, "Air Service at St.-Mihiel," *World's Work*, XXXVIII (August 1919), 361-64.

assigned to independent counter-air action until air supremacy was obtained. On the day of the St.-Mihiel attack Mitchell posed a brigade of mixed bombardment and pursuit elements on either side of the German salient. The brigades, 500 planes each, alternated in striking the salient, driving off and destroying enemy planes, and attacking all possible surface targets in the salient. The concentration of force gave the Americans virtually complete protection from German air interference.<sup>21</sup>

After the smashing success at St.-Mihiel, Mitchell prepared to participate in the still larger ground operation of the Meuse-Argonne. In this offensive the Americans were in the position of attacking from, rather than against, a salient, but the same tactic of air concentration was applicable. Mitchell's plan was to concentrate the mass of his bombers and pursuit on the main axis of ground advance; by so doing, he would help clear the way and at the same time protect the main body of troops. As the artillery preparation began on the night before the assault, Mitchell launched his counter-air action. Night bombers were sent out against enemy air-dromes, rail stations, supply depots, and communication centers. At dawn all of his aviation was in the air, the bombers striking straight ahead at enemy ground elements. The Germans, according to Mitchell, tried to force dispersion of the Allied pursuit force by attacking balloons all along the front. Mitchell, however, stuck to his principle of concentration and followed a plan of employing two pursuit groups and one bomber group in concert against a given point. Each group nominally had 100 planes, of which about 60 were operational at any given time. These heavy attacks forced the enemy air to fight, and in these engagements the Allies enjoyed the advantage until the Germans de-

veloped strength in the area and greatly outnumbered the Allies. Even then, Mitchell reported, the system of concentration enabled the Allied units to inflict much more damage than they received.<sup>22</sup> Mitchell's tactics succeeded in breaking up enemy air formations and thereby gave general protection to the American troops.

In the long battle, which dragged on for 47 days, the Allied air force also registered successes against enemy troop formations. On one outstanding occasion Mitchell concentrated the units of his command, plus the bombardment aviation of the French Air Division (which had been in reserve), for attack upon a large enemy force preparing to make a counter move. The armada proceeded to the target area at 15,000 feet, and although it was met by all available enemy units, resistance to the force proved futile. The Allied formations lost no planes, while destroying 12 of the enemy. They dropped 39 tons of bombs, which, when added to 30 tons dropped elsewhere by other units, established a one-day record for the first World War. The planned German assault did not get off, and Mitchell declared, ". . . it was indeed the dawn of the day when great air forces will be capable of definitely effecting a ground decision on the field of battle."<sup>23</sup>

Mitchell's experience and success in controlling support forces during the World War were the basis for his generalizations regarding the proper organization of what was later to be called tactical aviation. He believed that, for any given operation, available air units should be placed under the control of an Air Service commander. This air officer, having received the over-all plan of an operation from the superior command, would proceed to draw an appropriate air

<sup>22</sup>William Mitchell "Air Service at the Argonne-Meuse," *World's Work*, XXXVIII (Sept. 1919), 555-58.

<sup>23</sup>*Ibid.*, p. 558.

<sup>21</sup>*Ibid.*, pp. 364-65.



plan which would include provisions for concentration of units, liaison, signals, and the actual attack operation. The air plan would be coordinated with G-3 and G-2 of the Army staffs and would then be submitted for approval to the commanding general. Having been approved, the plan would serve as a guide for the plans of each subdivision of aviation; those plans would then be put into effect by field orders "in the usual form" as military operations progressed.<sup>24</sup>

In describing the organization and control of military aviation, Mitchell emphasized that it should be handled essentially as an offensive combat arm. The extraordinary flexibility of airpower, due to its great speed, was held up as the special feature to be utilized. And, wrote Mitchell, "Like any other military operations, concentration of force at vital point is what counts." He recognized that this fact was not always appreciated by the ground troops. Since crucial air combat was often fought beyond the front lines to keep the main enemy air away from Allied troops, when individual hostile planes occasionally broke through the screen and zoomed over the lines, the ground forces gained the impression of having been abandoned, whereas the reverse was actually true. Mitchell insisted that concentration of force be maintained in spite of such criticisms and urged proper indoctrination of the troops in order to avoid unfriendly feeling between ground and air services.<sup>25</sup> The views of Mitchell regarding flexibility of airpower, concentration of force, and control of aviation by air officers were to continue as leading doctrinal principles of the air leaders in the period after 1918.

#### *Pursuit aviation*

The use of airplanes for liaison purposes

<sup>24</sup>William Mitchell, *Tactical Application of Military Aeronautics*, 5 Jan. 1919, pp. 8-9, in USAF HD 167.4-1.

<sup>25</sup>*Ibid.*, pp. 9-10.

and for close-support observation and reconnaissance was readily accepted by both air and ground officers during World War I. The doctrine supporting such employment was relatively simple and obvious; and though theory and practice developed harmoniously they became more or less static. Such was not the case with the other main branches of military aviation, pursuit, bombardment, and attack. In each of these the theory and practice were to prove dynamic and controversial. During World War I the greatest development took place in pursuit; the cocky little single-seater became the chief focus and symbol of airpower.

The Americans had little to do with originating or developing pursuit doctrine during World War I. The first American unit to go into action was the 94th Pursuit Squadron, Capt. Eddie Rickenbacker's famous "Hat-in-the-Ring" outfit. Since the 94th did not enter active combat operations until 14 April 1918,<sup>26</sup> it may be seen that the total American unit experience was something less than seven months when it was cut short by the armistice. For the most part, the Air Service took over and applied the training methods and tactics which the Allies had developed in the course of the air battle with the Germans.

While the British are credited with being the first to mount guns on observer aircraft in the early months of the war, the Germans were the first to construct a purely combat type of plane. Anthony Fokker, after inventing a fixed machine gun synchronized to fire through the propeller, designed for the Germans a single-seater fighter, which eliminated the necessity for an observer-gunner and permitted the pilot himself to sight and fire by aiming his ship at the target. Thus in this ancestor of all pursuit planes the speed and maneuverability inherent in a

<sup>26</sup>Arnold, *Global Mission*, p. 55.

single-seater were combined with the superior accuracy of fixed gunnery. When the Germans assigned their new Fokkers to the front lines in June and July of 1915, air combat was completely revolutionized. At the same time the Fokker pilots began flying in gangs, echeloned for their mutual protection, to originate pursuit formation tactics.<sup>27</sup>

With their numerical superiority in airplanes suddenly neutralized by the superior performance and armament of the enemy pursuits, the Allies moved quickly to regain the qualitative advantage. In 1916 the French outmatched the Fokker with their Nieuport XXIII; this machine at 110 miles per hour could outrun any other on the front and was equipped with a free-firing Lewis gun mounted within the pilot's reach on the upper wing. The Nieuport XXIII remained the standard Allied fighter until late 1917. Meanwhile, mass pursuit action became common on both sides. By July 1917 Baron Richthofen was leading his famed "circus" against large units of Allied fighters. The forces involved in these swirling jousts were approximately of group size; the era of the individual pilot, fighting alone, was ended. The pattern for pursuit equipment, doctrine, and tactics thus became established before the end of World War I. It was accepted by the American Air Service and remained basically unchanged until the outbreak of World War II.<sup>28</sup>

In their postwar appraisals of the air experience of World War I airmen agreed that the first and foremost principle emerging from the war was that air supremacy was the primary aim of an air force. Because the first duty of pursuit was the destruction of hostile aircraft and because air superiority was considered prerequisite to all other operations it was held that pursuit was the

most important element of the air force. Pursuit's ultimate success depended upon equipment, selection and training of pilots, numbers, organization, and tactics.<sup>29</sup>

As to equipment, experience had shown the superiority of the high-powered, single-seater, which had the requisite characteristics of maximum speed and maneuverability. Although monoplanes, because of their higher speed and better visibility had been tried, the biplane for structural reasons was still safest and most reliable. It became standard during the war and remained so for 10 years thereafter. The successful pilots were those who displayed the most energy, resourcefulness, sound judgment, and offensive spirit. Certain physical characteristics were soon recognized as of special value. In addition to a generally sound and youthful physique, pilots required steady nerves, sharp eyesight, instinctive reactions, and excellent coordination. The record of World War I confirmed the importance of individual pilots differences: Some 200 pilots on both sides destroyed a majority of all planes shot down. The leading aces revealed one outstanding trait in common: eagerness for combat.<sup>30</sup>

Organization of pilots into flights, squadrons, and groups—securing at each level the optimum combination of controllability and concentrated force—proved an important element in the battle for air supremacy. Intimately associated with organization was the problem of combat tactics. It was fully realized by the end of the European war that victory would not be achieved by the exploits of individual aces acting on their own. Team work became the basis of all tactical developments, and this concept was carried up

<sup>27</sup>Maj. James E. Parker, ACTS lecture, History and Development of Pursuit Aviation, 3 Nov. 1938, p. 9, in USAFHD 4646-65.

<sup>28</sup>*Ibid.*, pp. 10, 12, 20, 23.

<sup>29</sup>ACTS, Pursuit Aviation, Sept. 1933, p. 111, in USAFHD 4778-6; Air Service Information Circulars Nos. 72, 73 (12 June 1920), No. 84 (20 Sept. 1920), No. 88 (30 June 1920); ASFOS, Training Reg. No. 440-14, 1922.

<sup>30</sup>Air Service Information Circular No. 73 (12 June 1920); ACTS, Pursuit Aviation, Sept. 1933, p. 111.



through the largest operational unit, the group. Pursuit formations were given special attention as the necessary basis of effective teamwork.<sup>31</sup> Captain Claire L. Chennault, writing later (1933) while an instructor in the Air Corps Tactical School, criticized details of the formation tactics of World War I, charging that they virtually ignored the principle of altitude, provided inadequate security and reserve force, and allowed the formation leader to lose command of his unit when he plunged into personal combat.<sup>32</sup> After the war there was improvement in formation and command tactics, but teamwork remained paramount.

Proper tactics for protection of friendly aircraft and friendly ground troops by pursuit was a subject of considerable discussion during the war and immediately thereafter. Most observation and bombardment crews deemed convoy or close protection by a flight of pursuit aircraft as the surest form of air security; as protection against hostile air attack many ground commanders desired an aerial barrage, in which friendly aircraft set up a "barrage" over friendly front lines to serve as a barrier to hostile aircraft. The Air Service, however, warned against these two defensive roles in which pursuit had been used in the war. Close protection was objected to on the grounds that it was "exchanging the shadow for the substance," for such employment deprived the pursuit airplane of its offensive capability, the advantage of surprise, and the ability to choose the most favorable time and place for air combat. Aerial barrages were opposed on the basis that, in addition to the defects of close protection, forces would be equally strong everywhere, and, therefore, equally weak everywhere; such employment of friendly pursuit would enable enemy air-

power to concentrate and break through at any desired point. Moreover, it would be economically impossible for any nation to provide the number of planes that would be required to guarantee immunity of friendly territory from hostile attack. The Air Service soon decided that instead of being employed in close protection and aerial barrages pursuit would provide indirect protection by means of flexible offensive action in which pilots could take full advantage of the elements of surprise, position, initiative, and aggressiveness. Given sufficient force, pursuit so used would be able to destroy more enemy fighters and give more effective protection to friendly forces than when limited to a purely defensive role. Thus, pursuit assumed a broad, offensive role in war—and was viewed as the basic arm of airpower and the key to air supremacy.<sup>33</sup>

#### *Bombardment aviation*

General Mitchell, writing immediately after World War I, recognized the leading role that pursuit had taken in military aviation. At the same time he had great hopes for the development of bombardment, and he predicted that its principal value would lie ultimately in "hitting an enemy's great nerve centers at the very beginning of the war so as to paralyze them to the greatest extent possible."<sup>34</sup> As for actual experience, the French first conducted industrial bombardment in January 1915,<sup>35</sup> and the entire wartime growth of this branch of aviation was limited to a period of less than four years. Bombardment was divided into two classes, tactical and strategical. Both were considered chiefly as a means of bringing about defeat of enemy armies in the field;

<sup>33</sup>*Ibid.*, p. 10; *United States Army in the World War, 1917-1919* (Washington, 1948), XVII, 229; Mitchell, *Tactical Application*, p. 2; Air Service Information Circular No. 72 (12 June 1920); AFSOS Training Reg. 440-14, 1922.

<sup>34</sup>Mitchell, *Tactical Application*, p. 3.

<sup>35</sup>AS Bul., Vol. III, No. 101. 9 Apr. 1918, in *Air Service History*, AEF, Ser. L, VII.

<sup>31</sup>Ltr. AAS Comdr., 2d Army to C/AS AEF, 18 Dec. 1918, in World War I Orgn. Records, Natl. Archives; Air Service Information Circular No. 84, 20 Sept. 1920.

<sup>32</sup>ACTS, Pursuit Aviation, Sept. 1933, pp. 84-85.

the first involved attack over the battlefield, and the second called for long-range strikes against centers of military supply. For the performance of its mission, strategical aviation was assigned specialized day and night Daylight operations were in large part armed bombers as well as protecting pursuit planes, reconnaissance missions; night operations carried the heavy destructive loads.<sup>36</sup>

Most of the operations of so-called "strategic" aviation were not truly strategic operations as later conceived and practiced. During World War I bombardment was definitely oriented toward the support of ground forces. However, the idea of true strategic aviation was born during those years and evolved into definite theory and experimental practice. Chiefly because of limitations in equipment, operations never advanced beyond the rudimentary stage; airplanes had not been developed with sufficient capacity to be decisive in a strategic sense. Yet the German Zeppelin raids on London in 1917 pointed to the strategic potential of airpower. One clear response to these raids in Great Britain was the creation, shortly thereafter, of the Royal Air Force as a separate service; and within the RAF was established an independent force "for direct action against the heart of the German industrial system." This force was given on 5 June 1918 to the command of Maj. Gen. Sir Hugh M. Trenchard. Trenchard became widely recognized as the leading prophet and pioneer of strategic aviation, and he strongly influenced the thinking of later air leaders like Mitchell and the Italian Douhet.<sup>37</sup>

<sup>36</sup>Bul. of the Inf. Sec., Air Service, AEF, Vol. III, No. 132, 16 Apr. 1918, in *Air Service History, AEF*, Ser. L, VII.

<sup>37</sup>Gen. Carl Spaatz, Ret., and Dr. Bruce Hopper, "Strategic Bombing," in *Ten Eventful Years*, ed. Walter Yust (Chicago, 1947), IV, 176; interviews by author with Brig. Gen. Thomas D. Milling, Ret., 4 June 1952; Lt. Gen. Ira C. Baker, Ret., 31 July 1952; Lt. Gen. Harold L. George, Ret., 31 July 1952; Gen. Joseph T. McNarney, Ret., 5 Aug. 1952.

Although the work of Trenchard's Independent Air Force (IAF) seems puny by comparison with the bombing figures of World War II, the effort was considerable. From 6 June 1918 until the armistice, a little more than five months, the force carried 550 tons of explosives to enemy targets—four times the amount dropped by all types of American units during approximately the same period. Although Trenchard felt compelled, as a defensive measure to protect his striking force, to direct one-half of his bombs against enemy airdromes, he carried the attack to some 50 towns and cities. The results, in consequence, were spread very thinly. Trenchard explained that he had faced the alternative of concentrating on one or two major targets or ranging over a substantial number. He chose the latter course because the force allotted to him was too small to destroy completely even a single large center, while the broader attack over a wide area disturbed civilian morale and required diversion of effort to defensive preparations in all towns within his reach. The physical damage resulting from these raids was almost negligible in any one city, but Trenchard held that the ratio of the "moral effect" to material effect stood at twenty to one.<sup>38</sup>

Regardless of how one might assess the relative damage and cost of Trenchard's program, there is no doubt about the influence of his theories on the future of air warfare. In taking command of the IAF, Trenchard accepted the charge of the British Secretary of State for Air to undertake the bombing of German industrial centers. The commander of this special force related his task to the established job of beating the German Army. As he saw it, the IAF would attack "the German Army in Germany" at its most

<sup>38</sup>Maj. Gen. Sir H. M. Trenchard, "Report on the Independent Air Force," *Tenth Supplement to London Gazette*, 1 Jan. 1919, pp. 134-35.



vital point — its sources of supply. With this object in mind, Trenchard decided upon a day and night effort against enemy production centers, thereby anticipating the round-the-clock program of the Allied Combined Bomber Offensive of World War II. He admitted that higher losses would be sustained in daylight attacks but argued that without such operations the value of night bombing would be largely neutralized, because the enemy could arrange to work by day and disperse at night. Trenchard also pointed to the superior efficiency of day bombing and the difficulties of navigation and target identification in darkness. While he expected to reduce German military production by such tactics, he also hoped to undermine civilian morale and, if possible, the enemy government itself. To this end, he organized a group of bombers in England for attacks directly against Berlin, but the armistice intervened before any such mission could be flown. His main forces, based in the Nancy area of France, were never able to fly farther than 350 miles to and from their targets.<sup>39</sup> Within the limits of his planes' range and numbers, General Trenchard broke the trail for strategic doctrine and practice.

The Americans, while influenced by Trenchard, had parallel plans and operations of their own during World War I. From the beginning of their effort in 1917, at least some of the Air Service leaders had their eye upon industrial bombing as the most fruitful use of airpower.<sup>40</sup> In keeping with this, general plans for night bombardment, chiefly against industrial targets, had been laid down as early as August 1917. Although training of special night bombing squadrons did not commence until June 1918, studies had already been prepared to determine the critical enemy industrial centers

and target systems. An Air Service bulletin of 9 April 1918 defined the four principal areas within bombing range: the Mannheim-Ludwigshaven group, the Main group, the Cologne group, and the Saar-Lorraine-Luxembourg group. The article favored immediate attack upon the Saar rail system as the best means, considering the limited planes available, of knocking out the last-named group. With increase of the bombing force, the other three areas would become the prime objectives.<sup>41</sup> In March 1918 an Office of Air Intelligence was created within the G-2 section of GHQ, AEF. This office included a bomb target unit, prototype of the organizations which played such an important role in the strategic operations of World War II. The functions of this unit, as described in the *Air Service History*, included production of items which were to become very familiar in the next great air struggle: general target maps, target classification maps, antiaircraft defense maps, rail maps, industrial area maps, mosaic books, and objective folders. Also included were detailed bombing programs, records of operations, reports of effects of raids, and prescribed methods of attack upon various kinds of targets.<sup>42</sup>

The American air arm had begun to bomb the Rhine cities before the armistice, and General Mitchell claimed that within another year it would have reached the industrial districts around Essen as well as Berlin itself.<sup>43</sup> This was no hollow boast. Before the end of the war preparations were well advanced for a fairly extensive air offensive by the Allies.<sup>44</sup> Furthermore, the Americans had developed a definite and thorough doc-

<sup>41</sup>OC/AS, Night Bombardment Section, June 1918, in *Air Service History*, June 1918, in *Air Service History*, Ser. B, VI; AS Bul., Vol. III, No. 101, 9 Apr. 1918, in *Air Service History*, Ser. L, VII.

<sup>42</sup>*Air Service History*, Ser. M, II, 35-66.

<sup>43</sup>William Mitchell, *Skyways* (Philadelphia, 1930), p. 278.

<sup>44</sup>Brig. Gen. Haywood S. Hansell, Ret., lecture at Air University, The Development of the U.S. Concept of Bombardment Operations, 16 Feb. 1951, p. 4.

<sup>39</sup>*Ibid.*, pp. 134-36.

<sup>40</sup>Eaker and George interviews cited in n. 37.

trine to support strategic bombardment. The best exposition of this doctrine may be found in a document prepared during the war by Lt. Col. Edgar S. Gorrell, a paper described later by Maj. Gen. Laurence S. Kuter as the "earliest, clearest and least known statement of the American conception of air power. . . ."<sup>45</sup> While in charge of the technical section of the Air Service, AEF, Gorrell, in trying to anticipate the needs of the Air Service, for bombardment, undertook a careful study of the bombing situation and its possibilities. These initial efforts were to prove a useful start for him, for on 3 December 1917 Gorrell was placed at the head of the Strategical Aviation Branch of the Air Service in the Zone of Advance, AEF. He was now responsible for drawing plans for employment of the strategic force which would one day be available. In this task he was aided by several assistants, including Wing Commander Spencer Grey of the Royal Naval Air Service. Commander Grey, regarded by Gorell as the "world's greatest authority on air bombing," and other British experts, who had participated in bombardment missions, gave Gorell the benefit of their combat experience. The resulting proposal for strategic operations was submitted to the Chief of the Air Service late in 1917 and was approved by him as a guide for aerial preparations.<sup>46</sup>

The Gorrell plan was a truly striking fore-runner of the doctrine which matured years later in the Air Corps Tactical School. The author started with the observation that ground warfare had reached a stalemate and that some new means of attacking the enemy had to be found in order to achieve victory. He pointed out that both the Allies

and the Germans had begun to see the possibilities of aerial bombardment and that the enemy was reportedly far ahead in actual preparations for such a campaign. Gorrell insisted that the Allies must therefore adopt a bombardment project at once and carry it into effect at the earliest possible moment. So imminent did this new turn in warfare appear to Gorrell that he favored immediate action, "in order that we may not only wreck Germany's manufacturing centers but wreck them more completely than she will wreck our's next year." While recognizing the importance of tactical bombing, the principles of which were well understood, he went on to plead the necessity for "strategic bombing against commercial centers and lines of communications, with a view to causing the cessation of supplies to the German front." The way to stop German shells and planes at the front, declared Gorrell in anticipation of a point which was to echo down through the years, was to destroy the producing factories. An army could be compared to a drill; the point would continue to bore only if the shank remained strong. If the shank (the supporting national effort) be broken, the drill would fail. This metaphor was borrowed for frequent use in the arguments heard many years later at the Air Corps Tactical School.<sup>47</sup>

The strategical proposal established four main groups of targets. Three of these were identical with those set forth in the Air Service bulletin of 9 April 1918, referred to above: Mannheim-Ludwigshaven, Cologne, and the Saar valley. The Main group was not specified although Frankfort, the principal target on the Main, was assigned in the Gorrell plan to the Mannheim-Ludwigs-haven group. In addition, in conformance with the target division adopted by British

<sup>45</sup>Maj. Gen. Laurence S. Kuter, *Air Power—the American Concept*, n.d., p. 12, in USAFHS Ln. Off., Washington, D. C.

<sup>46</sup>Col. E. S. Gorrell, "Early History of the Strategical Section, Air Service," 1919, *Air Service History*, Ser. B, VI, 371-72.

<sup>47</sup>*Ibid.*, pp. 373-75.



experts, the Gorrell plan specified a Düsseldorf group.<sup>48</sup> Gorrell agreed with Trenchard on the importance of combined day and night operations against these areas. He passed over the various arguments for and against each method, insisting that only by continuous attacks could the Germans be deprived of rest and hindered in making necessary repairs. In the beginning, Gorrell allowed, the Allies should use whatever type of bombing equipment they had, but ultimately, round-the-clock operations would be essential.<sup>49</sup> The plan did not follow Trenchard's concept of widely spread, light attacks. It proposed, rather, that all available planes be concentrated upon a single target each day, with the aim of its complete destruction. Gorrell believed that such tactics would result in the maximum damage, both moral and physical, to the enemy. He thought that in face of such an assault the defenses would be overwhelmed; the "manufacturing works would be wrecked and the morale of the workmen would be shattered."<sup>50</sup> Here was a prophecy even more accurate than Trenchard's of the Allied saturation attacks of 1944 and 1945.

It is necessary to observe, of course, that the Gorrell idea did not materialize during World War I. This was not for lack of specific tactical plans, for the proposal contemplated using the British technique of applying the principle of mass by bombing in groups and combinations of groups. On 5 February 1918 Colonel Gorrell was promoted to the position of Air Service officer of G-3, GHQ, AEF; Col. A. Monell became his successor as chief of strategic aviation. This change of personnel may have had some influence on the failure of the plan to become operative, but looking back a few months after the armistice, Colonel Gorrell

correctly discerned the two more fundamental reasons: the failure of American aircraft production to measure up to the forecasts of 1917, and the opposition of GHQ to any substantial strategic diversion. Symptomatic of the latter attitude was the step taken in the summer of 1918 to change the name of the Strategic Aviation Branch to GHQ Air Service Reserve. This was done, it was explained, to correct the impression that the organization was not entirely coordinated and synchronized with the whole AEF.<sup>51</sup> Gorrell's theories were destined to lie dormant in the Army of postwar years; it was not until the eve of the next World War that they emerged again, in slightly different form, to win at last the blessing and support of the General Staff.

#### *Attack aviation*

Observation, pursuit, and bombardment developed as distinct operations, using specialized types of aircraft, during the course of World War I. Not so with attack aviation—the youngest of the principal branches of America's air arm. In the closing months of combat the concept of attack operations emerged in the Air Service (as it had earlier in the German air arm), but the missions actually flown were incidental to the normal activities of pursuit, bombardment, and (rarely) observation aircraft. The usual targets were related to counter-air action—planes on the ground, airdromes, and other light installations. The Allies did not develop a special-purpose aircraft for such missions; the Germans, on the other hand, recognized the need early, and in 1917 developed a Junker type especially suited to strafing. By the end of the war the Americans were ready to follow Germany's lead. In his final report, General Patrick, Chief of Air Service, AEF, declared that direct attacks on ground forces from the air had

<sup>48</sup>*Ibid.*, pp. 376-77.

<sup>49</sup>*Ibid.*, p. 380.

<sup>50</sup>*Ibid.*, pp. 386-87.

<sup>51</sup>*Ibid.*, pp. 398-400.

shown a most demoralizing effect. "It will be well," he concluded, "to specialize in this branch of aviation and to provide squadrons or groups with armored airplanes provided with machine guns and small bombs for just such work against ground objectives. . . ."<sup>52</sup>

General Mitchell, his imagination quickly fired by what he saw in the possibilities of attack aviation, was even more enthusiastic. He extended the list of likely targets to include enemy transport (both land and sea) and armored vehicles. He proposed at the close of hostilities the organization of some regular units of attack aviation as soon as new equipment could be completed and tested. The new equipment, as visualized by Mitchell, would be armored and designed for low-altitude work—"They are almost flying tanks," he explained.<sup>53</sup> Thus, attack aviation was born of World War I, with substantial promise of future development. In the interval between world wars, the realization of that promise was to prove disappointing, when the problem of attack aviation became snarled in controversy, technical difficulties, and neglect.

#### *Air plans during the armistice*

The state of general development of American aviation resulting from World War I may be seen in the official plans of the AEF immediately after 11 November 1918. In the event of resumption of hostilities, the Air Service was assigned the general missions of preventing enemy air observation, conducting reconnaissance against the enemy, and hindering the enemy's concentration of troops and supplies. The latter

mission was to be achieved in part by day bombardment of the principal German transportation hubs, supply dumps, and troop cantonments, to a depth of twenty-five kilometers (about fifteen miles); night bombers would strike into rear areas against strategic points, rail centers, military parks, and airdromes.<sup>54</sup>

It seems clear that by the time of the armistice, American air war plans were still oriented toward the support of ground troops, but they rested on the idea of concentration of force and counter-air operations as the most effective means of rendering such support. At least in the minds of pioneer thinkers like General Mitchell, there was room, too, for novel and experimental operations—some in connection with the ground battle and others quite apart from it. According to Mitchell's diary, General Pershing before the armistice approved his proposal to use parachute troops against the enemy. Mitchell undertook detailed plans for the operation, which involved the use of a large force of bombers, enough to drop a full division of infantry behind the German lines at Metz. This anticipation of things to come was accompanied by other, more radical notions. Mitchell made plans for burning German fields and forests by means of incendiary bombs and for wiping out livestock with poison gas. "I was sure that if the war lasted, air power would decide it," concluded Mitchell some years later.<sup>55</sup>

<sup>54</sup>Plan of Employment of Air Service Units, 3d Army, AEF, by command of Maj. Gen. Dickman, sgdt. Malin Craig, C/S, n.d., in Gen. William Mitchell Papers, Reports, No. 41, Library of Congress.

<sup>55</sup>Isaac D. Levine, *Mitchell, Pioneer of Air Power* (New York, 1943), pp. 146-48.

<sup>52</sup>ACTS lecture cited in n. 19, pp. 6-7.

<sup>53</sup>Mitchell, *Tactical Application*, pp. 5-6.



## ORIGINS OF THE CHEMICAL CORPS

BY LEO P. BROPHY\*

The Chemical Warfare Service (CWS)<sup>1</sup> came into being as the result of an unprecedented change in the technology of war. The introduction of gas warfare by Germany in April 1915 presented new problems of military techniques with which none of the Allied Powers was then prepared to cope. As early as the fall of 1915 the War Department began to show an interest in providing troops with protection against gas and assigned responsibility for the design and development of respirators to the Medical Department. In carrying out his responsibilities, the Surgeon General detailed certain medical officers to the British and French armies as observers, and these officers sent back periodic reports which included information on gas defense.<sup>2</sup> No steps were taken to supply the troops with masks or to prepare the U. S. Army for offensive gas warfare until early in 1917.

The War Department's early lack of serious concern about the new type of warfare might be attributed to the fact that the effectiveness of gas attacks with the agents then in use was waning by 1917 because of the efficiency of antigas protection. It was

not the War Department but a civilian branch of the Government that took the first step in preparation for the employment of toxic agents. Early in 1917 Franklin K. Lane, Secretary of the Interior, surveyed his department to determine how it might contribute to the national defense, and decided that the Bureau of Mines which, since its establishment in 1910, had been investigating poisonous gases in mines might be utilized in assisting the Army and Navy in developing a gas war program. On 8 February, Van H. Manning, Director of the Bureau of Mines, wrote to C. D. Walcott, chairman of the Military Committee of the National Research Council (NRC) offering the Bureau's services.<sup>3</sup> Formal action on the recommendation was taken on 3 April 1917, when the Military Committee of NRC appointed a subcommittee on noxious gases to "carry on investigations into noxious gases, generation, and antidote for same, for war purposes."<sup>4</sup> Under the chairmanship of the Director of the Bureau of Mines, the subcommittee included ordnance and medical officers from both Army and Navy as well as two members of the Chemical Committee of the National Research Council. The work of this group provided the genesis of the chemical warfare research effort of the United States

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<sup>1</sup>The Chemical Warfare Service was designated the Chemical Corps by P. L. 607 on 2 August 1946.

<sup>2</sup>*Medical Aspects of Gas Warfare*, Vol. XIV of THE MEDICAL DEPARTMENT OF THE UNITED STATES ARMY IN THE WORLD WAR (Washington: GPO, 1926), p. 27.

<sup>3</sup>(1) Van H. Manning, War Gas Investigations, Dept of Interior Bull 178-A (Washington: GPO, 1919).

(2) Memo by G. S. Rice, Bureau of Mines, regarding early history of mask and gas investigations for the Army, 9 Jan 18. RG 70 Nat'l Archives.

<sup>4</sup>Record of Meeting of Mil Comm, NRC, 3 Apr 17. RG 70 Nat'l Archives.

in World War I. It was not until the German Army began the use of dichloroethyl sulfide, the so-called mustard gas, as a liquid toxic filler for projectiles, in July 1917, that the War Department began to give serious consideration to preparations for gas warfare. This agent was persistent, it proved to be a high casualty producer, and it considerably widened the scope of chemical warfare.<sup>5</sup>

As the gas warfare needs of US troops in France began to reach Washington they were turned over to the War Department bureau to which each seemed to relate. The basic requirement was for a gas mask; this, because of its prophylactic nature, was assigned to the Medical Department for procurement and distribution. Training of individuals in use of the mask then became a medical responsibility.<sup>6</sup> The manufacture and filling of gas shells was assigned to the Ordnance Department, which erected a new arsenal for this purpose at Edgewood, Maryland.<sup>7</sup> Engineer troops were selected for the projection of chemical agents and a regiment of Gas and Flame Service troops, to be known as the 30th Engineers, was authorized.<sup>8</sup> The supply of gas alarms became a function of the Signal Corps.<sup>9</sup> An agency for solving technical problems was at hand in the Committee on Noxious Gases mentioned above.

<sup>5</sup>(1) John J. Pershing, *My Experiences in the World War* (New York: Frederick A. Stokes, 1931), I, 166-67; (2) Amos A. Fries and Clarence J. West, *Chemical Warfare* (New York: McGraw Hill, 1921), p. 151.

<sup>6</sup>In September 1917, a Gas Defense Service, Sanitary Corps, Medical Department, was activated. This Service, in which a group of 45 chemists were commissioned, was placed in charge of training. In April 1918 the officers of the Gas Defense Service were transferred to the Corps of Engineers. See *Report of the Director of Chemical Warfare Service 1919* (Washington: GPO, 1920), pp. 43-49.

<sup>7</sup>For detailed account of the building of Edgewood Arsenal, see Benedict Crowell, *American's Munitions, 1917-1918* (Washington: GPO, 1919), pp. 395-409.

<sup>8</sup>(1) WD GO 108, 15 Aug 17; (2) Official History of First Gas Regiment (formerly 30th Engineers), Part I, 1. MS n.d. Copy in CMLHO.

<sup>9</sup>*Report of the Director, CWS, 1919*, p. 3.

In September 1917 this committee established a research and experiment station, financed by the War and Navy Departments and operated by the Bureau of Mines, at The American University on the outskirts of Washington.<sup>10</sup> The Bureau of Mines also supervised research activities on war gases at many universities and industrial laboratories throughout the country as well as at laboratories of other government agencies.

In the meantime the problems of gas warfare administration were receiving serious consideration in the theater of operations under the urgency of an active gas warfare situation. A board of officers was appointed to plan a gas warfare organization for the American Expeditionary Forces (AEF) on 18 June 1917, a few days after General John J. Pershing's arrival in France.<sup>11</sup> The board analyzed the gas warfare establishments of the British, French, and Germans and considered the recommendations of Dr. George A. Hulett of Princeton University, who had spent some time in England and France studying the use of gas in war. Following the board's recommendations, General Pershing decided to centralize the handling of all gas warfare matters under an independent agency. He reported his scheme of organization to Washington on 4 August 1917, recommending that a similar consolidation be adopted by the War Department.<sup>12</sup>

Two weeks later General Pershing assigned Lt. Col. Amos A. Fries, an Engineer

<sup>10</sup>*Medical Aspects of Gas Warfare*, pp. 35-36.

<sup>11</sup>Memo, Col. J. McA. Palmer, C Opns Sec, Hg AEF, to CofS AEF, 30 Jul 17, sub: Gas and Flame Service, Offensive and Defensive. Copy of this memo is an appendix in History of CWS, AEF, MS, a detailed account of organization and administration, which is apparently the official history written shortly after WWI. Copy in CMLHO.

<sup>12</sup>(1) Ltr, CinC AEF to TAG, 4 Aug 17, sub: Chemical or Gas Service. (2) James G. Harbord, *The American Army in France* (Boston: Little, Brown and Co., 1936), p. 128. Maj Gen James G. Harbord states that details of proposed organization were sent to WD on 28 July.



Officer, as "Engineer in Charge of Gas."<sup>13</sup> Pershing was acquainted with Fries' abilities since the latter had served under him in the Philippines in 1905. As Engineer in Charge of Gas, Fries became the Chief of the Gas Service, AEF, when it was officially established on 3 September 1917.<sup>14</sup> The following day Fries was raised to the rank of Colonel and placed in command of the 30th Engineers, the Gas and Flame Regiment.<sup>15</sup> He at once set up headquarters at Chaumont, where he would be in close touch with the General Headquarters of the American Expeditionary Forces.

The AEF order which established the Gas Service specified that the chief of the service would be "charged with the organization of the personnel, the supply of material and the conduct of the entire Gas Service, both Offensive and Defensive, including instruction." The first task confronting Fries was that of securing suitable officer personnel. Even before the Gas Service was officially established he had obtained the services of two Medical Department Officers, Lt. Col. (later Colonel) James R. Church, who had been observing the effects of gas on French troops, and Capt. Walter M. Boothby, who had been given a similar assignment with the British. Colonel Church headed the Medical Section of the Gas Service until December 1917 when he was succeeded by Col. Harry L. Gilchrist.<sup>16</sup> The Medical Section was re-

sponsible for the training and instruction of medical officers and other personnel in hospitals and divisions in the treatment of gas casualties, as well as the inspection of front lines and hospitals as to methods and facilities for the care of gassed cases.<sup>17</sup>

From the other branches of the Army including Engineers, Ordnance, Cavalry, and Infantry, Fries obtained some 200 officers who, while they were assigned to the Gas Service, continued to hold commissions in their respective branches. These officers, as well as the enlisted men who were transferred to the Gas Service, were given a course of instruction in gas defense at the First Corps Gas School which was activated on 15 October 1917.<sup>18</sup> The same month an Army Gas School, with courses in both defensive and offensive gas warfare, was started at Langres.<sup>19</sup> Later three other training schools were established.

Next to the difficulty of obtaining personnel, the most serious problem which faced Fries when he became Chief of the Gas Service was that of providing for a supply of gas masks and other protective equipment for American troops. Just prior to Fries' appointment 20,000 gas masks received from the United States had been tested by the British, upon request of Captain Boothby, and had been found to be entirely unsuitable for use on the battlefield.<sup>20</sup> Fries knew that he would have to look for other sources of supply and took immediate steps to purchase British masks, or box respirators, as they were called, and French M-2 masks.<sup>21</sup> Sec-

<sup>13</sup>Cablegram (Pershing), No 111-S, Paris, France, 18 Aug 17, Par 19, appointing Lt. Col. Amos A. Fries, CE in charge of gas and flame service.

<sup>14</sup>(1) Interv, Historical Office with Maj Gen Amos A. Fries (Ret), 4 Aug 55; (2) Copy of AEF GO 31, 3 Sep 17, which established the Gas Service, appears in Historical Division, SSUSA, *General Orders, G.H.Q., A.E.F.*, Vol. XVI of series U S ARMY IN WORLD WAR 1917-1919 (Washington: GPO, 1948), p. 67.

<sup>15</sup>Historical Division, SSUSA, *Reports of Commander-in-Chief, A.E.F., Staff Sections and Services*, Vol. XV of series U S ARMY IN WORLD WAR 1917-1919 (Washington: GPO, 1948), p. 291.

<sup>16</sup>(1) Official History of CWS, AEF, pp. 7-8. This 71-page typed MS, together with 65 supporting appendices is in files of CMLHO. (2) *Medical Aspects of*

*Gas Warfare*, pp. 39-50. (3) Fries and West, *Chemical Warfare*, p. 114.

<sup>17</sup>*Medical Aspects of Gas Warfare*, pp. 67-73.

<sup>18</sup>(1) AEF GO 45, 8 Oct 17. (2) Schedule, First Corps Gas School A.E.F., Official History of CWS, AEF, Appendix 13.

<sup>19</sup>(1) AEF GO 46, 10 Oct 17. (2) Schedule of Instruction, AEF Army Gas School, Official History of CWS, AEF, Appendix 15.

<sup>20</sup>(1) Amos A. Fries, *History of Chemical Warfare Service in France*, p. 4 MS in CMLHO.

<sup>21</sup>AEF GO 53, 3 Nov 17, made Gas Service respon-

and in importance to supplying the Army with masks was the task of equipping special gas troops with such weapons as cylinders, mortars and projectors for the dispersion of agents. Fries also made arrangements to purchase these items from the British and it was well that he did, for none were received from the United States until just before the close of the war.<sup>22</sup>

Colonel Fries was fortunate in securing the services of a very competent officer, Maj. (later Colonel) Robert W. Crawford, whom he put in charge of procurement and supply activities in the Gas Service early in September 1917. Crawford's Procurement and Supply Division, as his unit came to be known, not only handled the purchase of material, but also drew up plans for and supervised the construction of three separate gas depots in the First Army Area and four in the Second Army Area. These depots were placed in operation in October 1918 under depot officers who were on the staffs of the respective Army gas officers.<sup>23</sup> Crawford also drew up plans for construction of phosgene manufacturing plants, shell filling plants and a gas mask repair plant. The idea of constructing phosgene and shell filling plants in France was given up after Colonel Fries had studied the matter in detail and made a recommendation to that effect to General Pershing. The chief reason for abandoning those projects was the inability to obtain sufficient chlorine in France.<sup>24</sup> But the plan for building the mask repair plant was carried to completion and in November 1917 four officers and 110 enlisted men of the Medical Department arrived from the United States to operate this plant. Because of a change in schedule, the plant was not put into opera-

tion until June 1918. Meanwhile the officers and men were given temporary reassignments.<sup>25</sup>

In addition to personnel, training, and procurement and supply responsibilities, the Gas Service, AEF, had definite technical responsibilities. Since the latter were so closely associated with developments in the zone of interior they will be discussed in that connection.

The start of centralizing chemical warfare activities within the War Department dates from October 1917, when an office of Gas Service was set up, with Col. Charles L. Potter, an Engineer Officer, as director. This was an attempt to satisfy the need for an agency in Washington that would know everything that was going on with regard to chemical warfare both at home and abroad. The Gas Service was to be the "coordinating agent" between the various bureaus and laboratories engaged in gas warfare activities, and all communications from abroad dealing with gas warfare were to be routed to that office. Provision was made for three assistants to the director of the new service, one from the Ordnance Department, another from the Medical Department, and a third from a newly created Chemical Service Section of the National Army, established under the same directive that established the Gas Service.<sup>26</sup> The Chemical Service Section was to consist of 47 commissioned and 95 enlisted personnel.

The Chemical Service Section, National Army, was created to fill a request of General Pershing, repeated five times between 26 September and 9 December 1917,<sup>27</sup> for a

<sup>25</sup>(1) *Ibid.* (2) *Medical Aspects of Gas Warfare*, p. 30.

<sup>26</sup>Memo, CofS for TAG, 16 Oct 17. sub: Gas Service of the Army. CWS 322.095/101-140. The section of this dealing with the establishment of the Chemical Section, N.A., also appears in WD GO 139, 1 Nov 17.

<sup>27</sup>Pershing's five cables are repeated verbatim in Memo, Col. Charles L. Potter, Dir Gas Service to CofS, USA, 28 Dec 17, no sub. CWS 322.095/141-200

sible for supplying all division, corps, and Army gas officers with antigas supplies.

<sup>22</sup>Fries and West, *Chemical Warfare*, p. 78.

<sup>23</sup>Official History of CWS, AEF, p. 48.

<sup>24</sup>Fries and West, *Chemical Warfare*, p. 104.



chemical laboratory, complete with equipment and personnel, to investigate gases and powders. Professor William H. Walker of the Massachusetts Institute of Technology was commissioned a lieutenant colonel and made chief of the Chemical Service Section. In that capacity he was, of course, assistant director of the Gas Service. Walker set out to recruit qualified personnel for a laboratory unit for overseas duty. In January 1918 the first members of this unit, consisting of about twenty-five officers and ten men, under the command of Col. Raymond F. Bacon, arrived in Puteaux, near Paris, where Colonel Fries had set up a laboratory. Here the scientists in uniform conducted experiments on gases until the close of the war. To satisfy the need for testing gas shells and fuzes and conducting other gas warfare experimentation, a test field was set up near Chaumont. This field was named Hanlon Field in September 1918 in honor of Lt. Joseph T. Hanlon, the first chemical warfare officer to be killed in action.<sup>28</sup>

A development in connection with gas research in the theater was the holding of Inter-Allied Gas Conferences for the exchange of scientific information. Three such conferences were held during the war, in September 1917, March 1918, and October 1918. From the point of view of the American scientists the last was the most satisfactory, because by that time the Americans felt they had come to know as much about gas as their European co-workers. At this conference for the first time sat representatives from the laboratories in the United States, including Professors Elmer P. Kohler and Warren K. Lewis.<sup>29</sup>

Interallied cooperation in the theater was

not confined to research but extended to supply as well. At the suggestion of Mr. Winston Churchill, an Inter-Allied Commission for Chemical Warfare Supply was set up in May 1918.<sup>30</sup> Between May and November this Commission, on which sat representatives of Great Britain, France, Italy and the United States, held six meetings. By the time of the Armistice the commission was said to be "gradually assuming the position of a board of directors, regulating production and distribution in accordance with existing needs."<sup>31</sup>

While the Chemical Service Section, National Army, was rendering assistance to the theater on the research program, Colonel Walker's headquarters was also taking steps to coordinate gas research activities in the United States. By January 1918 the number of military personnel doing research under the guidance of the Bureau of Mines at The American University Experiment Station and various other laboratories had risen to over 200 officers and over 500 enlisted men. These were under the jurisdiction of various elements of the Army: Ordnance, Engineers, Signal, Sanitary Corps of the Medical Department, and the Chemical Service Section, National Army. It was highly desirable that these personnel should be placed under one Army agency and on 10 January Colonel Potter, Chief of the Gas Service, recommended to the Chief of Staff that they be placed under the command of the Chemical Service Section. This request was favorably considered with the result on 15 February the authorized strength of the Chemical Service Section was raised to 227 officers and 525 enlisted men.<sup>32</sup>

<sup>28</sup>(1) Official History of CWS, AEF, pp. 18-19 and pp. 56-57; (2) Fries and West, *Chemical Warfare*, Ch IV; (3) *Reports of Commander-in-Chief, A.E.F., Staff Sections and Services*, pp. 300-02.

<sup>29</sup>Official History of CWS, AEF, p. 52.

<sup>30</sup>(1) Pershing, *My Experiences in the World War*, I, 357; (2) Official History of CWS, AEF, p. 27.

<sup>31</sup>Official History of CWS, AEF, p. 28.

<sup>32</sup>M. T. Bogert and W. H. Walker, History of the Chemical Service Section, appendices C and D. This 7-page manuscript account, exclusive of appendices, was written in 1919. In Tech Library, ACC, Md.

In addition to research activities, the Chemical Service Section, from early 1918 on, was called on more and more by the Ordnance Department for recommendations on the manufacture of gases at Edgewood Arsenal. Thus while the purpose behind the Chemical Service Section was to coordinate without integrating, and without disturbing functions of the statutory bureaus of the War Department, it was becoming evident that the system was developing serious defects. What was needed was a greater degree of administrative centralization. Two additional factors were working toward this end. The large and growing number of scientists engaged in research in gas warfare was insisting on recognition. And the desirability of having a responsible gas warfare organization within the United States that would parallel that in the theater of operations was obvious.

#### THE CHEMICAL WARFARE SERVICE, NATIONAL ARMY

In the spring of 1918 separate recommendations were made both in the zone of interior and in France to establish a gas corps. On 17 April Lt. Col. Marston T. Bogert, who had succeeded Lieutenant Colonel Walker as Chief of the Chemical Service Section, recommended to the Chief of Staff that that section be replaced by a "chemical corps" which would be on a "basis more nearly like that occupied by the Engineering and Medical branches of the Army."<sup>33</sup> In this way, Bogert contended, chemists in the Army would be under the guidance and control of chemists. This recommendation was not favorably considered.<sup>34</sup> On 1 May Colonel Fries recommended to General Pershing

that a gas corps be established in the AEF. Fries gave as his chief reason the very compelling fact that for a year past the enemy had been using gas as an essential part of every offensive and that the Gas Service, AEF, simply did not have the necessary administrative power to prosecute an effective gas program.<sup>35</sup> Pershing was favorably impressed by Fries' recommendation and on 3 June he cabled to the Chief of Staff in the United States requesting that a gas corps be activated.<sup>36</sup> This request, like Bogert's, was not favorably considered.

While the War Department took no action on setting up a separate chemical or gas corps, it did take definite steps in the spring of 1918 to establish a stronger centralized organization for gas warfare. What was especially needed at that time was a "name" officer of rank and personality who could overcome obstacles and break log jams. This proved to be Maj. Gen. William L. Sibert, one of the builders of the Panama Canal and lately commander of the First Division in France. Appointment of Sibert as Director of the Gas Service on 11 May 1918<sup>37</sup> was quickly followed by a number of administrative changes in line with the trend toward integration of chemical warfare functions which had been evident for some time. On 25 June 1918 the President issued an executive order transferring the Experiment Station at The American University from the Bureau of Mines to the War Department.<sup>38</sup> Three days later the War Department issued

<sup>35</sup>Ltr, C, Gas Service AEF to Commander-in-Chief AEF through CG SOS, 1 May 18, sub: Reorganization of Gas Service. Official History of CWS, AEF, Appendix 37.

<sup>36</sup>Cable No 1240-S, CG AEF for CofS USA, 3 Jun 18, Official History of CWS, AEF, Appendix 38.

<sup>37</sup>Col. Potter was succeeded as C, Gas Service, on 30 Jan 18 by Mr. Arthur Hudson Marks who served only a few days. Lt Col William H. Walker was acting chief, Gas Service, from that time until Sibert's appointment on 11 May. See *Report of the Chemical Warfare Service 1918* (Washington: GPO, 1918), p. 5.

<sup>38</sup>Executive Order No. 2894, 25 Jun 18.

<sup>33</sup>Memo, Lt. Col. Marston T. Bogert, Cml Serv Sec N.A., to CofS, USA, 17 Apr 18, sub: Chemical Service Section Personnel. Bogert and Walker, History of the Chemical Service Section, Appendix C 1.

<sup>34</sup>1st Ind to above memo, 6 May 18, Appendix C 3 in Bogert and Walker, History of Chemical Service Section.



War Department General Orders No. 62, which formally established the Chemical Warfare Service, National Army, and sweepingly specified the transfer to the new organization of all facilities and functions applying to toxic chemicals.

While World War I was in progress the United States was obliged to rely on the Allies, particularly the British, for chemical munitions. This situation was rapidly being corrected late in 1918. Manufacturing facilities in the Astoria section of New York City were by then capable of meeting all the requirements for protective equipment and the production of toxic agents at the Edgewood Arsenal plants was totaling 675 tons per week.<sup>39</sup> Responsibility for the production of defensive items was put in the Gas Defense Production Division, CWS, headed by Col. Bradley Dewey, while supervision of toxics was placed in the Gas Offense Production Division, of which Col. William H. Walker was chief. Technical activities also divided between two divisions, a Research Division, headed by Col. G. A. Burrell, and a Development Division, headed by Col. F. M. Dorsey. To test gas munitions a proving ground was established at Lakehurst, New Jersey, and adjoining this proving ground a training camp for gas troops, Camp Kendrick, was activated under the Training Division. All activities connected with the medical aspects of gas warfare were placed in a Medical Division, headed by Col. W. J. Lyster.<sup>40</sup>

The very day that General Orders No. 62 was issued, the War Department cabled Pershing informing him of the creation of the CWS and requesting him to cable back the names of the officers to be transferred to the new service as well as the numbers and grades of officers and men required in

France.<sup>41</sup> The transfer of troops to the new service in the theater was made official on 16 July when an authorized strength of 916 officers and 7,264 enlisted men was approved for the Overseas Division, CWS, which was to be headed by a brigadier general.<sup>42</sup> Colonel Fries was thereupon raised to the rank of brigadier. Later when the War Department, in anticipation of an increase in the use of gas, authorized two additional gas regiments, the authorized strength of the Overseas Division was raised to 1,315 officers and 17,205 enlisted men.<sup>43</sup> Because of the sudden collapse of the enemy nothing like that strength was ever attained, and as of 11 November 1918 the actual number of officers and men in the Overseas Division totaled 630 and 2,800 respectively. This compared with actual strength of the entire CWS on that date of 1,680 officers and 18,838 enlisted men.<sup>44</sup>

General Fries' headquarters, like the office of General Sibert, was organized along functional lines. Since greater emphasis had to be placed in the theater in actual employment of gas on the battlefield, two divisions were set up for that purpose, an Offensive Division and a Defense Division. Other divisions of the CWS, AEF, were: Procurement and Supply, Technical, Medical, and Intelligence.

With the establishment of the CWS the Gas and Flame Regiment of the 30th Engineers became the First Gas Regiment. The regiment had been activated in August 1917 under Capt. (later Colonel) Earl J. Atkisson at Camp American University, Washington, D. C. In January 1918 the first two companies, A and B, arrived in France, where, through an arrangement between Fries and Maj. Gen. C. H. Foulkes of the British

<sup>39</sup>Cable No 1622-R, McCain to Pershing, 28 Jun 18, Official History of CWS, AEF, Appendix 39.

<sup>42</sup>Cable, No 1724-R, McCain to Pershing, 16 Jul 18, Official History CWS, AEF, Appendix 41.

<sup>43</sup>Cable, No 2027-R, Harris to Pershing, 7 Oct 18, Official History of CWS, AEF, Appendix 60.

<sup>44</sup>Report of CWS, 1919, pp. 14-15.

<sup>39</sup>Crowell, *America's Munitions*, pp. 407-09 and pp. 426-27.

<sup>40</sup>Reports of CWS, 1918 and 1919.

Army, they were given intensive training by the British Special Brigade, the gas brigade. Following the training they accompanied the British on actual gas operations on the field of battle. When two other companies arrived in France in March the officers and men of companies A and B assisted in training the new arrivals. The facilities of the five gas schools in France were also utilized in the training of these and subsequent gas troops arriving from the United States.<sup>45</sup>

Troops of the First Gas Regiment were employed in operations on the Western Front from the summer of 1918 until the close of the war. Their biggest engagement was in the Argonne-Meuse offensive in which six companies of the regiment saw action. In this campaign gas troops expended some 489 Stokes mortar gas shells, 130 Livens projector gas drums, 206 Livens projector drums filled with high explosives and over 2,800 smoke and thermite bombs.<sup>46</sup>

Following the close of hostilities a rapid start was made to demobilize CWS troops and facilities. By June 1919 the troop strength of the CWS had been reduced to 328 officers and 261 enlisted men, the government gas mask factory in New York had been demobilized, 670 contracts had been adjusted, over a million dollars worth of surplus property had been disposed of, and the plants at Edgewood and Lakehurst were being put on a peacetime basis.<sup>47</sup> The bulk of government-owned chemical plants throughout the country were yet to be sold or transferred to other government bureaus; that was a task that would run well into the following year.<sup>48</sup>

<sup>45</sup>(1) James Thayer Addison, *The Story of the First Gas Regiment* (Boston and New York: Houghton Mifflin, 1919), Ch III; (2) Maj Gen C. H. Foulkes, *Gas, The Story of the Gas Brigade* (Edinburgh and London: William Blackwood and Sons, 1934), p. 298.

<sup>46</sup>Official History of CWS, AEF, p. 67.

<sup>47</sup>Report of CWS 1919, pp. 15, 51.

<sup>48</sup>Report of the Chief of the Chemical Warfare Service 1920 (Washington: GPO, 1920), p. 15.

War Department General Orders No. 62 had provided that the CWS would continue until six months after the termination of hostilities or until the general order itself was amended, modified or rescinded. An Act of Congress of 11 July 1919 extended the life of the CWS until 30 June 1920.<sup>49</sup> On 28 November the War Department defined the CWS peacetime mission as follows:

(a) The maintenance of a competent body of chemical warfare specialists with facilities for continuous research and experimentation.

(b) The maintenance of records.

(c) Provision for keeping in touch with civilian agencies for chemical research and chemical industries capable of being converted for the production of wartime material.

(d) The maintenance of such existing Government plants as may be decided necessary.

(e) The continuous training of the Army in chemical warfare.

(f) The maintenance of a supply of chemical warfare material sufficient to meet the initial requirements of the Army in time of war.

Meanwhile Congress began to study changes needed in military organization in the light of recent war experiences. Since the establishment of the Signal Corps in 1860<sup>50</sup> there had been no additions of the War Department technical services. One of the questions now to be decided was, what should be done about chemical warfare? This matter was examined carefully by the Military Affairs Committees of the Senate and the House of Representatives.

The recommendations of the officials of the War Department varied. Some suggested that the wartime CWS be abolished and its work be apportioned among the older established services. Others felt that the CWS should be retained. Newton D. Baker, the Secretary of War, believed that peacetime activities in this field would be princi-

<sup>49</sup>41 Stat L, p. 129.

<sup>50</sup>12 Stat L, 64, 66.



pally in research and development, which the Corps of Engineers could handle.<sup>51</sup> The Chief of Staff, Gen. Peyton C. March, who abhorred gas warfare, also felt that the Corps of Engineers should be given responsibility for preparations for gas warfare, which in peacetime should be restricted to the defensive aspects.<sup>52</sup> General Pershing, like most older line officers, disliked the idea of toxic gas but he was not adamant on the subject; in fact he was rather inclined toward retaining the Chemical Warfare Service as a separate department.<sup>53</sup>

The first powerful voice that was raised in support of an independent chemical service in the Army was that of Benedict Crowell, the Assistant Secretary of War, and the man principally responsible for the success of the munitions program of 1917-1918. Crowell, who had been educated as a chemist and believed that future warfare would depend largely on the work of men of science, strongly urged that the wartime CWS organization be made permanent.<sup>54</sup> This of course was echoed by the officers who had been closely identified with gas warfare while hostilities were in progress, Sibert and Fries, both supported by many officers who had served with them. Fries was particularly active. Less than two weeks after the close of hostilities he had obtained General Pershing's approval for his return to the United

States in order to work for a permanent CWS.<sup>55</sup> He was a personal friend of both the Chairman of the Senate Committee on Military Affairs, Senator George E. Chamberlain of Oregon, and the Chairman of the House Committee on Military Affairs, Representative Julius Kahn of California. Fries lost no opportunity in conveying to those gentlemen his strong conviction of the need for a permanent chemical bureau in the Army.<sup>56</sup>

The idea of a chemical service as a permanent bureau of the War Department was also strongly advocated by leading chemical scientists and industrialists, who had come to regard the existence of such a service as a recognition of the growing importance of chemistry in the national economy.<sup>57</sup> The interest of these groups doubtless influenced the decision of Congress in 1920 to write into its revision of the National Defense Act of 1916 a new section starting with the words: "There is hereby created a Chemical Warfare Service."<sup>58</sup>

The purpose of the wartime Chemical Warfare service had been to handle all matters relating to toxic agents and ammunition together with gas defense material. Incendiaries and smokes were not mentioned in General Orders No. 62, although before the end of the war considerable work on both these items had been done by the CWS. This fact is reflected in the wording of the revised National Defense Act, which accordingly enlarged the CWS field. Thus was completed the shift in emphasis from the "gas" service of 1917 to the "chemical" service of 1920.

<sup>55</sup>Amos A. Fries, *History of the CWS in France*, MS in CMLHO.

<sup>56</sup>Fries Interv.

<sup>51</sup>S. Comm. on Military Affairs, 66th Cong., 1st Sess., Hearings on S. 2715, *A Bill to Reorganize and Increase the Efficiency of the United States Army and for other Purposes*, 19 Aug 19.

<sup>52</sup>(1) H. Comm. on Military Affairs, 66th Cong., 1st Sess., Hearings on H.R. 8287, *A Bill to Reorganize and Increase the Efficiency of the United States Army and for other Purposes*, 5 Sep 19, I, 53-54; (2) Peyton C. March, *The Nation At War* (Garden City, N. Y.: Doubleday-Doran, 1932), pp. 333-36.

<sup>53</sup>H. Comm. on Military Affairs, 66th Cong., 1st Sess., Hearings on H. R. 8287, *A Bill to Reorganize and Increase the Efficiency of the United States Army and for other Purposes*, 1 Nov 19, pp. 1507-08.

<sup>54</sup>H. Comm. on Military Affairs, 66th Cong., 1st and 2nd Sess., Hearings on H.R. 8287, *A Bill to Reorganize and Increase the Efficiency of the United States Army and for other Purposes*, 9 Jan 20, II, 1804-05.

<sup>57</sup>See statement of Charles H. Herty, Editor of the *Journal of Industrial and Engineering Chemistry*, in S. Comm on Military Affairs, 66th Cong., 1st Sess., Hearings on S. 2715, *A Bill to Reorganize and Increase the Efficiency of the United States Army and for other Purposes*, p. 408.

<sup>58</sup>P. L. 242, 66th Cong., Section 12a; (2) WD Bull 25, 9 Jun 20, reproduces Section 12a in toto.

The function of the new branch included the development, procurement and supply of "all smoke and incendiary materials, all toxic gases, and all gas defense appliances." These duties were further extended to include "the supervision of the training of the Army in chemical warfare, both offensive and defensive . . . ; the organization, equipment, training, and operation of special gas troops, and such other duties as the President may from time to time prescribe."<sup>59</sup> The Chemical Warfare Service therefore took on Service-wide training functions, together with

responsibility for combatant troops, in addition to technical supply duties. For this work the National Defense Act authorized a chief of the service with the rank of brigadier general, 100 officers and 1,200 enlisted men.

The Chemical Warfare Service was a product of the changing technology of war. Only reluctantly did the War Department provide for its activation. Once established, it would take many years for the new organization to be fully accepted in the military family. In fact, it would require the experience of a second world war to convince the War Department of the real need for a separate chemical service.

<sup>59</sup>*Ibid.*

## THE WAR POTENTIAL OF NATIONS

By KLAUS KNORR

War potential, as conceived in this volume, is the combination of factors from which military strength can be mobilized in time of war or international tension. In a closely reasoned analysis of the various elements which constitute the latent military strength of nations the author, a professor of Public and International Affairs, Princeton University, takes up economic capacity, "the will to fight," and the administrative skill of government, and shows how they may be developed and evaluated in the contemporary setting. He has drawn on a wealth of historical material for various countries and on relevant research in political science, economics, sociology, and psychology. *Published for the Center of International Studies of Princeton University.*

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## NOTES AND ANTIQUITIES

### MAHAN'S DOCTRINE AND THE AIR AGE

By W. H. RUSSELL\*

Throughout America thoughtful men recognize the need for mature doctrine in the air age. They are aware that we now have doctrine for disposing air strength and they find it good, but they perceive the distinction between *good* and *mature*. Bridging this gap holds the key to our national security.

Though real and present, this problem is not new. For nearly 200 years each succeeding American generation has confronted the dilemma of adapting tested combat doctrine to new weapons and to revolutionary technology. Throughout our national history we have resolved this dilemma by what has always seemed momentary inspiration flowing from trial and error. Gradually the trials have become less erratic. Fortunately for us who now face the most massive technological revolution to date, there exists a body of analytical military writing which—if used properly—can guide us toward the mature air-age doctrine wherein our survival depends. Paradoxically this body of analysis deals not with air power but with sea power. It comprises the major works produced by Alfred Thayer Mahan between 1885 and 1911—eight volumes which he aptly called the influence of sea power upon history.†

\*The author is on the faculty of the U. S. Naval Academy.

†The works referred to here are: *The Influence of Sea Power upon History, 1660-1783*; *The Influence of Sea Power upon the French Revolution and Empire, 1793-1812* (2 vols.); *The Life of Nelson, the Embodi-*

Superficially it seems archaic to move so far back in time for a guide toward mature doctrine in the air age. But is it; or does Mahan represent the emergence of sound military doctrine for the United States? His father, Dennis Hart Mahan, graduated from the U. S. Military Academy, studied in France as Lafayette's protégé, mastered the works of De Jomini, and enhanced that knowledge during 40 years of teaching at West Point. As a young officer Mahan experienced prolonged operational duty in the years 1861-65. Later, as a protégé of Stephen B. Luce (the Navy counterpart of Dennis Mahan), he invested 25 mature years in conscious effort toward adapting American combat doctrines to the then revolutionary impact on war of steam, steel, improved explosives, and liquid fuel. During those years he analyzed carefully basic doctrines from the outgoing age of sail, and showed how to modernize combat techniques without sacrificing sound lessons from his and our own past.

In this process Mahan concluded (in effect) that when man faces the prospect of fighting today's battle with the mere promise of tomorrow's weapons he holds three choices: (1) wait for the dust to settle; (2) build brand-new from the very foundations; and (3) adapt the best past experience to

*ment of the Sea Power of Great Britain* (2 vols.); *Sea Power in its Relation to the War of 1812* (2 vols.); *Naval Strategy*.

the new elements in his problem. For Mahan, Solution 1 was defeatist and Solution 2 smacked of fatal arrogance. In Solution 3 he recognized war's traditional option of difficulties, but also the promise of success for courageous intellects. And so it is in our time. Therefore we can do far worse than examine Mahan's major writings in our search for mature doctrine in the air age.

This conclusion is far from simple because reading Mahan offers its own option of difficulties. As a child of the 19th century both his style and his semantics pose genuine problems for today's reader. Mahan was so modest that he assumed others could see into military complexity as readily as he did. And, finally, most competent criticism of Mahan rests almost exclusively upon what he called his minor works rather than on his eight-volume analysis of the influence of sea power upon history. In consequence, to discover what Mahan really said requires genuine will power. Yet the effort will reward you, if only because of the release it offers from the extremes of defeatism.

As a preliminary to serious reading in Mahan one must accept the fact that he was not a determinist. That is, he was not an absolutist who reached decision by eliminating fundamental elements which complicated a problem. Instead he was a relativist in the same sense as Einstein; a thinker who could grapple with the functions of complex variables. Since the basic problem Mahan faced is also ours, we may well ground ourselves in its essentials by mastering Mahan's analysis wherein we will find the same variables that plague tomorrow's doctrine, but in a form somewhat less complex.

After one has read Mahan long and often enough to perceive the trend of his thinking, a root concept begins to stand out like a beacon. He recognized two essential factors: (1) that our conventional military thinking had

been conditioned by some 500 years of warfare in the particular terrain of western Europe; and (2) that significant future combat would develop in areas lacking those particular terrain features. Though he wrote primarily of the sea (certainly a relatively unfeatured area), Mahan's thinking applies equally to combat in other featureless areas like the desert or the air, as well as to very heavily featured mountainous areas.

Actually this discovery by Mahan, that conventional military thinking is tied to a specific terrain was not haphazard. His father's study of Jomini foreshadowed it, for unlike Clausewitz who emphasized Napoleon's reaction to the terrain of West Europe, Jomini stressed Napoleon's earlier experience in unconventional terrain. Mahan's own wartime experience complemented this facet of his family environment, and the influence of Luce, the erudite seaman, supplemented it. Nor has Alfred Mahan been the only American naval officer to perceive even dimly the universality of combat problems in relatively unfeatured areas. In 1943 when Commander Arleigh Burke, USN, adapted destroyer doctrine to electronics, he borrowed consciously from the desert campaign of Scipio Africanus against Hannibal.

This line of argument certainly will not, of itself, convince each reader that his own survival hinges on mastering the analyses of Alfred Thayer Mahan; nor is it intended to clinch a point which cannot be won without careful reading and hard thought. Indeed, only a fatal arrogance would induce one to complete such an argument in so few words. However, there is here the suggestion that Mahan may lead us toward the answer to questions that must be faced if we are to achieve mature doctrine for the air age.

Are you interested, for example, in an answer to any of the following questions?



Are men and nations still bound by conscience to preserve their essential way of life, and by violence if necessary?

Should national policy require armed forces to wreak as little havoc on an enemy as is consistent with gaining the objects of national policy?

Do logistics still dominate war?

Will air commerce (a facet of producer logistics) comprise an important component of air power by creating realistic objectives for armed forces as well as by stimulating the evolution of combat craft or their logistical support?

Should combat aircraft concentrate their attacks on enemy forces *actually* capable of interrupting friendly logistical flow?

In relatively featureless theaters of war should offensive forces aim at the enemy flank nearest his source of supply?

Is the projection of assault infantry onto enemy territory *the* efficient means for exploiting decisive air battle?

There is no guarantee that these questions imply all the elements of Mahan's doctrine, or of mature air-age doctrine. Nor can one guarantee that reading in Mahan will answer even these sample questions. Yet no interested American who reads carefully Mahan's major works can fail—in the process—to refine his own thinking upon these and the many similar questions implicit in the problem of attaining mature doctrine for the air age.

## PROCEEDINGS OF THE ORDER OF INDIAN WARS

BY RALPH W. DONNELLY

When the Order of Indian Wars affiliated with the American Military Institute in 1947, the files and accumulated records of the OIW were placed in the custody of the Institute.

The collection on the Indian Wars consists of clipped magazine and newspaper articles, personal manuscripts, and copies of reports filed by participants with Army authorities. These have been catalogued and cross catalogued according to author, title, campaign, tribe, regiment, etc. While copies of this catalogue are no longer available for distribution the Institute can answer questions as to the availability of material on specific Indian War topics covered by the file. This material is filed in large manila envelopes, each bearing an identifying letter and number.

Included in the files of the OIW is a series of printed pamphlets known as the *Proceedings* of the Order. These have now been gathered together and placed in individual file envelopes in chronological order. The

present file covers the years from 1911 through 1941, except for 1917 and 1927, for which we have not been able to locate or identify copies. The *Proceedings* carry much information concerning the business affairs of the Order, concerning the Annual Dinner, and, for some years, the text of the major address given at the Annual Dinner. In many ways these addresses constitute more valuable historical material than is to be found in the catalogued Indian War material file since many are firsthand accounts not printed elsewhere. The *Proceedings* file is supplementary to the regular file and, while some of the *Proceedings* are included in the regular file, some are not and can be obtained only from the *Proceedings* file. *Proceedings* which do not contain historical material are omitted from the following list:

1920—Camp, Walter Mason

"Review of the Indian Wars."  
(Speech printed in "Winners of the West.") OIW file #I-1.

- 1921—King, Maj. Gen. Charles  
"Battle of Slim Buttes." Pp. 20-39.  
OIW file #S-4.
- 1926—Traub, Col. Peter E.  
"Sioux Campaign—Winter of 1890-  
'91." Pp. 28-70. OIW file #S-13.
- 1928—Bisbee, Brig. Gen. William H.  
"Items of Indian Service." (Including Fetterman's Massacre.) Pp. 23-32. OIW file #I-12.  
"Lieutenant Fountain's Fight with Apache Indians at Lillie's Ranch, Mogollon Mountains, December 9, 1885, and at Dry Creek, N. M., December 19, 1885." Pp. 33-41. OIW file #I-12.  
"The Experiences of Major Mauck in Disarming . . . Cheyennes . . . in 1878." Pp. 41-46. OIW file #I-12.
- 1929—Parker, Brig. Gen. James  
"The Geronimo Campaign." Pp. 32-44. OIW file #G-5. (Also see *Proceedings of 1930*, pp. 26-28.)  
Gatewood, Maj. Charles B.  
"Lieutenant Charles B. Gatewood, 6th U. S. Cavalry, and the Surrender of Geronimo." Pp. 45-61. OIW file #G-6.  
Vestal, Col. Samuel C. (Ch. Hist. Sec., Army War College.)  
"A Plea for Cooperation." Pp. 66-71.  
Clay, Lt. Thomas J., USN  
"Some Unwritten Incidents of the Geronimo Campaign." Pp. 62-65.
- 1930—Kauffman, R. King  
"The Armistead-Kauffman Unit." Pp. 28-29.  
Fountain, Brig. Gen. S. W.  
"Remarks." Pp. 29-30.  
Brown, Brig. Gen. William C.  
"Citation Stars for Indian War Brevets." P. 31. "Indian War Papers of the Late Walter M. Camp." Pp. 31-32.
- 1931—Kerr, Brig. Gen. James T.  
"The Modoc War of 1872-'73." Pp. 24-52.
- 1932—McIvor, Brig. Gen. George W.  
"Washington in the French and Indian War." Pp. 24-49. OIW file #M-26.  
Lull, Lt. Col. Charles E. T.  
"Collection of Historical Material Relating to Indian Wars of the United States." Pp. 50-51.
- 1933—Robinson, Brig. Gen. Frank U.  
"The Battle of Snake Mountain." Pp. 19-26. OIW file #S-7. (Reprinted in *Military Affairs*, XIV/2/92-98.)
- 1936—Fletcher, Lt. Col. Robert H., Jr. (Secty., Hist. Sec., Army War College.)  
"Remarks." Pp. 20-21.  
Fieberger, Col. G. J.  
"General Crook's Campaign in Old Mexico in 1883." Pp. 22-32.
- 1937—Moore, Lt. Harry DeWitt  
"Modoc Indian War Letter." Pp. 21-28. OIW file #M-28.  
Steelhammer, Capt. Charles  
"Letter of October 15, 1879." Pp. 29-30. OIW file #S-25.  
Swaine, Lt. Col. P. T.  
"Answer to Steelhammer's Letter, Feb. 25, 1880." Pp. 30-31.
- 1938—Rhodes, Maj. Gen. Charles D.  
"Chief Joseph and the Nez Percés Campaign of 1877." Pp. 19-48.
- 1939—Flickenger, Samuel J. (Asst. Ch. Counsel, Off. Ind. Affairs, Dept. of the Interior.)  
"The American Indian." Pp. 21-31.
- 1940—Morgan, George H., late 2d Lt., 3d U. S. Cavalry.  
"The Fight at the Big Dry Wash . . . , July 17, 1882. . . ." Pp. 21-28.
- 1941—Morgan, George H., late 2d Lt., 3d U. S. Cavalry.  
"Army Life on an Indian Reservation in the '80's." Pp. 17-24.



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*Editor:* GEORGE J. STANSFIELD

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## REVIEWS

*The Civilian and the Military*, by Arthur A. Ekirch, Jr. (New York: Oxford University Press, 1956. Pp. 340. \$6.50.)

This book deals with the plowshare, rather than the sword. The sub-title, *A History of the American Antimilitarist Tradition*, accurately describes its contents. The author defines the antimilitarist as one who accepts war and armies as a sometimes necessary evil, but regards a large military establishment and conscript armies, even when needed, as a threat to the preservation of civil institutions of government. He finds the origin of this feeling in our Anglo-American heritage and traces its effect from our colonial days to the present.

By quoting from a variety of published sources he documents the influence of this tradition in keeping our military establishment small until we were actually at war. He finds that some of our wars, notably the War of 1812 and the Mexican War, were unpopular with many Americans because of our antimilitarist tradition. Much resistance to the Union and Confederate governments during the Civil War was motivated, he believes, by the force of this tradition. Similarly, he shows that our antimilitarist traditions have been responsible for the rapid demobilization of our military establishments at the close of each of our wars.

The concluding chapter of the book describes the current state of our antimilitarist tradition. The author states that the events since World War II gave the American people "little hope of any sudden return to real peacetime modes of living," and that this has modified the antimili-

tarist traditions of the American people. He declares it "difficult to believe that the society of the future would be governed by the antimilitarist traditions that (have) guided three centuries of American history."

RICHARD C. BROWN,  
*State University of New York  
College for Teachers, Buffalo*

*The Writing of American Military History: A Guide.* Department of the Army Pamphlet 20-200. (Washington: Department of the Army, June 1956. Pp. xi, 145. \$1.50.)

This guide, which succeeds one published in 1951, contains new material and, altogether, much valuable information. One chapter is devoted to such significant topics as "Military History in the Development of *Esprit de Corps* and Morale," "Military History and Planning," and "Military History in the Education of the American People." Another chapter outlines "A Progressive Course of Study in American Military History" for officers through 25 years of service. Still another chapter deals with "Sources of Information," while the last chapter is concerned with "Research and Writing," which will be principally useful to the amateur. Appendices are devoted to matters of style and to some excellent classified bibliographies.

One can find little to criticize in the main body of this little book which will be of considerable use to both military historians and those with a general interest in United States history. But archivists will no doubt bridle slightly at "Archival Collections" (p. 36), which is a contradiction of terms; friends of the Signal Corps will be-

disappointed at the failure to list the Signal Corps Museum at Fort Monmouth, New Jersey; and some persons will regret the omission of a brief description of the historical program and organization of the Department of the Army and of a list of all the governing directives. Unfortunately, as in many government publications, this one omits the names of contributors.

In spite of the general excellence of this work, a major exception must be taken to the explanation in the preface that "a military historian is one who is well-informed in military history and in subjects related to the military profession. Therefore, *any professionally qualified officer is a military historian*. In a narrower sense, a military historian is a writer or chronicler of military activities." Professional military historians, both in and out of uniform, will question the validity of the major premise and will resent the implication that their years of training in research and writing count for little. The cause of history is not well served by this presumptuous and ill-considered definition which heeds not the old admonition about the shoemaker and his last.

PAUL J. SCHEIPS,  
Arlington, Virginia

*The Power Elite*, by C. Wright Mills. (New York: Oxford University Press, 1956. Pp. 423. \$6.00.)

The author sets out to prove that there is, indeed, a "peck-order" in the hierarchies controlling the government of the United States today. He proceeds to ferret out these chameleons in the corporate bodies where, he is convinced, they are nourished and from which they emerge at strategic intervals to control or influence the vital decision-making bodies of our present government.

The author's thesis is that there are three dominant hierarchies in our nation's economic, military, and political structures. At the pinnacle of each of the three enlarged and centralized domains, there have arisen those higher, "basically irresponsible," circles which make up the corresponding "power" elites. At the top of the economy, among the corporate rich, there are the chief executives; at the top of the political order, the members of the political directorate; at the top of the military establishment, the elite of soldier-statesmen clustered in and around the Joint Chiefs of Staff and the upper echelon. The power that these few men exercise is not of themselves, their wealth, or knowledge. It derives rather from

their position in the great institutions. And if they are taken away from these resources then they would be powerless and poor and uncelebrated.

The chapters on "The Warlords," and "The Military Ascendancy" are most pertinent. In the latter, he points out that, as a result of our "permanent war economy," the military has invaded every field in the civilian economy: political, economic, educational, scientific. He feels that this is due to civilian default rather than military usurpation. All this has led to the party politician and the legislative branches being relegated to the "middle level" of national power, the Congress having abdicated to the Executive Branch, which now dictates policy through the "political outsiders" drawn from the world of big business. Although the author does not predict what the final results will be from this change in the "peck-order," it is clear that tranquillity in the flock will not be restored until the "peck-order" is again clearly defined.

Although tedious in some parts, the book is stimulating, thought-provoking, and well worth reading by students of the history of military institutions.

CAPT. A. T. WRIGHT, USN,  
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the Armed Forces  
Washington, D. C.

*Air War Against Germany and Italy, 1939-1943 [Australia in the War of 1939-1945, Volume III of Series 3 (Air)]*, by John Herington. (Canberra: Australian War Memorial, 1954. New York, 1955. Pp. 731. 25s.)

The projected twenty-two volume history of *Australia in the War of 1939-1945* is divided into five series dealing with army, navy, air, civil and medical services. This massive volume under consideration is the first of the four projected Royal Australian Air Force volumes to appear. As such, it recommends to the serious student of World War II the genuine contribution and usefulness of the Australian historical efforts. This particular volume should be regarded as a monument to the historical genius of its author who faced a very difficult task indeed.

War circumstances largely dictated the integration of Dominion contingents into a vast Commonwealth air force. Almost every Royal Air Force squadron contained Australian airmen. In 1939 there was but one Australian squadron in England and some 400 Australians were scattered



throughout the Royal Air Force. After the Pacific War captured the primary attention of those "down under" by the end of 1943, there were some 15,000 Australian airmen serving in the war against Germany and Italy, a proportion of them being in eighteen Australian squadrons. In this volume, their exploits in combat are noted in a manner documenting the human side of air war so often lacking in official histories. Moreover, political, psychological and administrative problems resulting from the integration of R.A.A.F. units and airmen in the Commonwealth air force are frankly discussed. The difficulties of coalition air operations are well illuminated in this detailed history.

But Mr. Herington's volume is much more than a painstaking examination of Australian contribution to the air fighting against Germany and Italy. To this reader, his volume presented an invaluable Australian view of the air war in Europe as a whole. Buttressed well with British, German and Italian documentation, the volume provides a refreshingly impartial account of Allied fortunes in the crucial phases of the war in Europe. Thus, Mr. Herington's effort transcended its primary purpose. It must be regarded as both an important contribution to the history of warfare as well as the course of Commonwealth relations.

DR. EUGENE M. EMME,  
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*China and the Cold War; A Study in International Relations*, by Michael Lindsay. (New York: Cambridge University Press; Melbourne: Melbourne University Press, 1955. Pp. 286. \$3.75.)

*China Under Communism, The First Five Years*, by Richard L. Walker. (New Haven: Yale University Press, 1955. Pp. 403. \$5.00.)

*Prospects for Communist China*, by W. W. Rostow in collaboration with Richard W. Hatch, Frank A. Kierman and Alexander Eckstein. (New York: Wiley; Cambridge: MIT, 1954. Pp. 379. \$5.00.)

*An American Policy in Asia*, by W. W. Rostow and Richard W. Hatch. (New York: Wiley; Cambridge, MIT, 1955. Pp. 59. \$1.00.)

"Know your enemy." This oldest of all military maxims cannot be ignored with impunity, —

a fact which was driven home forcefully after World War II when American ignorance of communist intentions and techniques allowed the Soviets to establish control over Eastern Europe and China. By 1945 the Western world and in particular the United States possessed no reliable and informative literature about the Soviet Union, although tons of misleading propaganda materials were available. Ten years later this gap was more or less closed: a considerable number of objective studies on communism had been produced and, by and large, the American public can now be considered to be reasonably well informed on Soviet affairs.

In the meantime, a new enemy has arisen, communist China. This enemy, within the first year of its existence, got involved in war with the U. S. and continues to display implacable hostility to the Western world. American ignorance about China today is greater than American ignorance about Soviet Russia in 1945. No adequate literature analyzing the Chinese "People's Democracy" exists, except for a few studies on the early history of Chinese communism and on the Chinese revolution. Fortunately, however, there are the beginning of a scholarly effort which bids fair to give us, within a few years, the background information which we shall need to develop intelligent policies.

Michael Lindsay's *China and the World War* (Melbourne University Press, 1955) is an interesting work which reflects many of the confusions which Western observers have been exhibiting vis-a-vis the Chinese problem. The British author at one time, served as propagandist to the Chinese communists. This book is partly a confession of his errors. In part, however, the author tries to show that between 1941 and 1950 when he was espousing the communist cause, he was fighting for commendable objectives and he is inclined to think that the communists got off the track, largely because they are irrational. The Chinese Communist Party changed but not the author, he avers. Lindsay compares the irrationalities of the West with those of the Chinese communists and in unguarded moments, even gets around to recognizing some of the questionable features of communist theory and practice. He does not understand, however, the communist doctrine, nor does he accept that the communists actually are pursuing their admitted goals. With many "buts" and "however's" he tries to fashion a Chinese communist after his own image. (He does not quite

comprehend the strategic and political problems of the United States either.) Nevertheless, the book is valuable because of its thorough if tortured discussion of Chinese politics. The author knows many of the Chinese leaders personally and he does succeed in showing that the professed ideology must be analyzed in the context of numerous other factors. In fairness it must be added that, while he suggests that the Chinese communists really do not want war, he does admit that in order to keep peace, modifications of the orthodox Marxist-Leninist ideology are "necessary." He believes that such modifications, "at least for the Chinese Communist Party," are "difficult but not impossible." Incidentally, despite its many dubious arguments, the book contains an excellent exposition of the scientific method in the socio-political sciences. The author may be seriously mistaken but he is a person of good will who tries hard to arrive at objective truth.

Richard L. Walker's *China Under Communism, the First Five Years* (Yale University Press, 1955) is the most up-to-date description of current conditions in that country. The author has made wide use of original Chinese sources many of which were made available to him by the United States Consulate General in Hongkong. He emphasizes that there is no dearth of information on Chinese affairs although, of course, communist materials always must be examined critically. Professor Walker devotes most of his attention to the methods by which the communists rule China, including the application of terror and psychological controls. For the military reader's benefit the following statement may be quoted: "The Chinese people are being uniformly conditioned to think in terms of violence." While the author paints a grim picture, he also makes it clear that communism has not sold itself to the Chinese people. In the author's opinion it would be a mistake for the West simply to write off China and to cease resisting various communist blandishments and expansions. Prof. Walker anticipates that the communist "will accomplish further impressive feats" but also that communism will fail because it cannot satisfy many "aspects of human life" and because the communists seem to be losing the "battle for the soul of China." "In the deliberate disregard of the right of the individual to be and to express himself, the Chinese communists have made their greatest long-run miscalculation."

*The Prospects for Communist China* by W. W.

Rostow in collaboration with Richard W. Hatch, Frank A. Kiernan and Alexander Eckstein (Wiley & Sons, 1954) covers some of the same ground as Walker's book but the importance of this volume lies, above all, in the analysis of the economics, past and future, of communist China. The authors show that, partly due to population increases, it will be very difficult for China to solve its industrial and especially its agricultural problems or, in any event, to do so without massive outside help. The authors try to be careful in their conclusions but it does appear that it will be far more difficult for the Chinese to carry out a program of industrial expansion than it was for the Russian communists. The significance of this book, however, rests less on its forecasts which may or may not be valid than on the careful analysis of China's economic problems. — The chapter on Sino-Soviet Relations is a pioneering attempt to shed some light on a subject on which practically nothing is known. The authors had little to go on but informed logic and they acquitted themselves of this hapless task as best as they or anyone else could.

Speaking of China's economic problems, attention may be called to an article by Vsevolod Holubnychy, "Soviet Economic Aid to China" in *Bulletin of the Institute for the Study of the USSR*, Munich, January 1956. This article, to a certain extent, bears out the findings of *The Prospects for Communist China*. It shows that the Soviets have not given China too much help and for that matter, deliver machinery and other goods mostly on a cash basis. On the other hand, this author indicates that China may have considerable capabilities of solving its economic problems through its own efforts, and that as of now China "is beginning to enlarge her economic influence in the world" by exporting "some machinery and industrial products of her own to Burma, Indonesia and North Vietnam," and even extending a loan to Albania, of all places.

The reader also may find it profitable to peruse the March 5, 1956, *Time* which prints an alarming and well-documented article on Chinese communist terror and on China's police boss, Lo Jui-ching. It appears that terror in communist China is considerably worse, in every respect, than the terror in Soviet Russia, even during its climax in the purges of the thirties.

In *An American Policy in Asia*, W. W. Rostow and Richard W. Hatch (Wiley and Sons, 1955) a blueprint is presented for American political



action. Insofar as China is concerned (the book covers a broader area), the authors believe that the U. S. can take advantage of several Chinese difficulties. Essentially, they recommend a policy of containment coupled with a "creative policy" to strengthen and speed up the economic and political development in free Asia. Free Asian countries should demonstrate that economic development can be accomplished without the price of terror, class liquidation, and communist dictatorship. If such a demonstration were successful and if the ideological struggle in Asia could be turned against the communists, the Chinese revolution might enter into a new phase, especially if the communists were to find it difficult to solve the succession problem after Mao's departure. China is not yet a great independent power but has only begun "the process of becoming one." Many difficulties will have to be overcome, and it is noteworthy that the communists have made their task harder by introducing "measures of forced grain sale and collectivization which the peasants oppose and which in the Soviet Union and eastern Europe have led to declining or sluggish agricultural output." This reviewer believes that this American program is good so far as it goes, but that it is inadequate to solve the pressing problems of American security in the Far East. However that may be, this book has made a start of a sane discussion on American Asian policies.

In summary, it is pleasant to report that American political scientists are beginning to get interested in communist China. Let us hope that these books will be studied carefully by all those Americans who are concerned about the ominous developments in Asia. In brief, the message of this first batch of American books on communist China is that the situation is by no means hopeless and that the cause of a future Chinese democracy should not be given up as lost. On the contrary, the inevitable failure of Chinese communism will open the way to good and better government in China—provided the United States recognizes its opportunities and rises to the occasion.

*MacArthur, 1941-1951*, by Maj. Gen. Charles A. Willoughby and John Chamberlain. (New York: McGraw-Hill Co., 1954. Pp. 454. Index. \$5.75.)

*MacArthur: His Rendezvous With History*, by Maj. Gen. Courtney Whitney. (New York: Alfred A. Knopf. Pp. 547. Index. \$6.75.)

Thomas Carlyle once observed that "history is the essence of innumerable biographies." In that sense these two portraits of Douglas MacArthur can be considered contributions to the study of one of the enigmatic figures in recent American annals.

Major General Willoughby served as MacArthur's G-2 from 1941 to 1951. Major General Courtney Whitney joined MacArthur's staff in 1943 and headed the Military Government section of his staff during the Japanese occupation. Both were about as intimate with MacArthur as any individual outside of his immediate family appears to have been and were unusually loyal and devoted staff officers.

In each of these volumes the stated objective is to give an eye-witness account of MacArthur's conduct of operations in World War II and Korea and his handling of the occupation of Japan. These books appear to have been written with MacArthur's blessing if the statements of the authors are to be accepted. It is regrettable that neither book provides as much factual new information as the authors' unique positions and experiences should have provided. Both authors make a determined effort to depict their commander as a peerless military strategist and tactician as well as an outstanding political and diplomatic sage. The record supports the MacArthur military reputation to a far greater degree than it does his clumsy efforts on the political level.

Enough objective military history has been recorded to assure General MacArthur of a high place on the roster of unusually fine military leaders with which the country has been endowed. History will not substantiate the infallibility which his two staff officers have endeavored to establish in these two books. There are areas in his conduct of military operations where it has subsequently been proven that another course would have been more productive. His decisions in the main were so well conceived and executed that it would be quibbling to "nit-pick" those few instances where his judgment was fallible. Willoughby and Whitney do not accept an over-all assessment of "superior" and seem to be pressing for a new rating of "perfect" which heretofore has been reserved.

The chronology of military affairs in the Pacific during the forties is overshadowed in both of these books by the relief of MacArthur by President Truman. This was the cruelest blow of all to the authors. It obviously has thrown them in-

to an emotional unbalance which leads to some truly remarkable statements and conclusions. On page 507 of his book, Whitney opens a chapter with this incredible statement "When the first cold notice of his recall reached MacArthur in Tokyo, he had not the slightest notion of why the President had taken such action." Willoughby puts it this way: "As far as MacArthur's own knowledge of its circumstances is concerned, his dismissal is still shrouded in considerable mystery." It is to be hoped that both of these gentlemen and General MacArthur, too, have now had an opportunity to review President Truman's memoirs in which he quotes messages of December 6, 1950, January 13, 1951, March 20, 1951, and the sterner one of March 24, 1951 directed to MacArthur, completely specific in their intent and which MacArthur violated coldly. It is far-fetched, indeed, for anyone acquainted with the loyalty which MacArthur rightly demanded from his subordinates to assume that he did not act with full knowledge of his deeds. The facts would seem to substantiate Mr. Truman's parallel between his difficulties with MacArthur and Lincoln's with McClellan.

Both books do present some new material that is of value. The intelligence reports and summaries which Willoughby has drawn on are real contributions. Likewise, Whitney's book brings to light some new material that previously had not been made public, notably some of the important messages between MacArthur's headquarters and Washington.

Students of military history look forward with anticipation to the day when a really objective portrayal of General MacArthur will be written. The two volumes under consideration here in no sense fill the void.

ROBERT F. COCKLIN,  
Washington, D. C.

***Gideon Goes to War: The Story of Major General Orde Charles Wingate***, by Leonard Mosley. (New York: Charles Scribner's Sons, 1955. Pp. 256. \$3.50.)

Few soldiers of World War II, friend or enemy, who knew Orde Charles Wingate, Britain's famed fighter of peripheral campaigns in Palestine, Abyssinia, and Burma, judge the youthful general impartially. To each of his associates, Wingate was either a military genius or a blundering fool, a humble, sure David or a vain Goliath, a crusader or a madman. In this readable and compact book, author Mosley attempts to sift

the truth from the prejudices about Wingate. It is a noble effort, but the book like the peripheral warriors which it describes is quite a distance from dead center. The author acknowledges, however, that this is a story about Wingate, not a definitive biography. Yet for the serious military man Mosley places Wingate's career in a new mould.

On the one hand we have the story of a soldier who proudly wore His Majesty's uniform and carried the Union Jack to new battlefields. (Actually most soldiers who met Wingate for the first time in far away places were shocked to find the "boy" general attired only in nature's own uniform.) On the other hand we have the tale of a British general who put aside his own national ties and crusaded in the cause of others' nationalism. With such a two-pronged story Mosley carries his readers through all the tangled thickets which Wingate led himself and others.

*Gideon Goes To War* trumpets Wingate's way of a fighter as Wingate's own, a career wherein a well-schooled and disciplined soldier often found himself in rebellion against himself. Wingate was his own commander, his own staff planner, and his own troop fighter. He scoffed at others and set his sights on acquiring "rank, rank, rank." And Mosley carefully does not overlook the guiding hand of Wingate's military godfather, Field Marshal Sir Archibald Wavell. Where Wavell commanded in a distant theater of the Empire, Wingate was sure to carry on in his own way. A lesson stands out in Mosley's story of the Wavell-Wingate relationship—an unorthodox fighter can only thrive when he is directly supervised by a superior who is a strict orthodox fighter.

There is a central theme to Mosley's story. It connects Wingate's pathetic struggle in Palestine, his lasting triumph in Abyssinia, and his tragic end in Burma. Wingate became a Gideon because he knew that native peoples must help themselves militarily, that the Great Powers have no substitute in time of war for the maxim of *quid pro quo*, and that an underdog will remain an underdog if he delights in parading his fatalistic or inferiority complex before others.

CHARLES P. ROMANUS  
Vienna, Virginia

***Gray Fox: Robert E. Lee and The Civil War***, by Burke Davis. (New York: Rinehart, 1956. Pp. xi + 466. \$6.00.)

In 1861 Robert E. Lee was invited to head the United States Army and to accept a commission as a general officer from his native state of Vir-



ginia. With only brief reference to his heredity, his marriage and his earlier military career, Mr. Davis effectively explains why the federal government and Virginia simultaneously offered these honors to the comparatively obscure colonel of Engineers.

This story of the four crucial years in the life of Robert E. Lee and the Confederacy begins and ends with cruel dilemmas. In April, 1861, Lee had to decide whether to stay with the United States Army or to join Virginia in defense of his native state. The decision was painfully difficult as Mr. Davis points out. Lee had called slavery "a moral and political evil." He had written: "I can anticipate no greater calamity for the country than a dissolution of the Union." Four years later his problem was equally tragic. Should he surrender the Army of Northern Virginia which he had led to many victories against fearful odds or should he acknowledge defeat and prevent further bloodshed?

These two dilemmas and the innumerable decisions in strategy and politics that had to be made in between then created intellectual and spiritual struggles which Mr. Davis handles with great skill and perspicuity. His vivid and profoundly moving interpretation of the Confederate leader is based largely on contemporary documents quoted at length. With a keen sense of the dramatic, Mr. Davis selects from Lee's own letters and reports and from eye-witness accounts of Lee and his army on the march, in camp and in battle episodes and anecdotes to explain the character and achievements of the general and his men. His portrait of Lee is realistic. It emphasizes his patience and forbearance with balky subordinates in comments like this in the early days of the war: "In his first brush with a disobedient general officer, Lee found himself too gentle, his modesty too genuine, to grasp the situation with the hand of command."

With his distinctive method and his vivid style, Mr. Davis merits a place of honor among Civil War historians. His study of Lee's generalship is as good as if not better than his earlier analysis of Stonewall Jackson.

DONALD ARMSTRONG,  
*Brig. Gen. USA Ret.*  
*Washington, D. C.*

*Custer's Luck* by Edgar I. Stewart, (University of Oklahoma Press, 1st Edition, 1955. Pp. 522, incl. index, illust., \$5.00)

Edgar Stewart, now Professor of History at

Eastern Washington College of Education, was an historical aide at the Custer Battlefield National Monument at Crow Agency, Montana in 1946 and he gained an unusual insight on the details of the Little Big Horn fight and the events leading up to it. He writes with a studious thoroughness based on an exhaustive examination of the documents of the survivors and other contemporary material. He has the ability to examine the bushels of chaff and sort out the grains of truth and produce a most readable story. No new material has been published, but his fresh and studiously thorough treatment of the vast amount of material available makes this volume rank among the finest that have been published since Fred Dustin brought out *"The Custer Tragedy"*, in 1939.

Some mistakes are apparent. The author, in writing about Lt. Col. Custer, states inaccurately on p. 167 that, "at the age of twentythree he was commissioned a Major General of Volunteers, youngest man ever to hold that rank in the history of the Army." The Marquise de La Fayette was commissioned a Major General in the Continental Army by Congress in 1777, at the age of 20. Custer was born on 5 December 1839, and was promoted from Captain to Brigadier General of Volunteers on 29 June 1863, upon recommendation of General Pleasanton. Custer was not promoted to Brevet Major General, U.S. Volunteers, until, 19 October 1864, after his twenty-fourth birthday, for gallant and meritorious service at the battles of Winchester and Fisher's Hill, Va.

On p. 334, the author states that the "advantage of attacking an Indian camp from several directions at the same time....had proved highly successful at the Battle of the Washita." A more applicable term would have been "barely successful" since the regiment had to shoot the 875 Indian horses that had been captured and then escape under cover of darkness from the inevitable counterattack that would come from the adjacent Indian camps. In this battle, Custer was so restricted in his movement he was unable to rescue the foolhardy Major Elliott and his party who were killed and mutilated by the Cheyennes.

This book, as have nearly all others on the Little Big Horn fight, suffers from a lack of sufficient maps. Although two maps have been furnished, neither shows the details of the march from the Yellowstone across the Continental Divide and down into the Little Big Horn Valley. Benteen's march to the left of the column, as in

all other books on the subject, is left up to the reader's imagination.

Author Stewart devotes the first part of the book to a lengthy discussion of the Indian situation from and before the Treaty of 1868, and the subsequent battles and massacres leading up to the Little Big Horn fight. A chapter on Custer's activity in connection with the impeachment of General Belknap as Secretary of War will be of interest because the skillful discussion of the chronological events and their relation to the results of the march of the Dakota Column ending in the Little Big Horn fight.

Professor Stewart portrays no anti-or pro-Custer bias, thus leaving the casual reader or student free to arrive at his own conclusions on many of the details of the fight.

MAJOR KENNETH M. HAMMER, USAF  
Wright-Patterson Air Force Base, Ohio

*Canada's Soldiers*, by George F. G. Stanley.  
(Toronto: The Macmillan Co. of Canada,  
Ltd., 1954; New York: Macmillan, 1955. Pp.  
401. \$6.50.)

Canada's military history, to an even greater degree than that of the United States, has been notable for the long intervals when there were no wars to be fought. For a full century, from 1814 to 1914, there were only two occasions when Canadian troops in any sizable numbers took to the field against an enemy: in 1885, when a force of nearly 8,000 militia and "regulars" was dispatched to northern Saskatchewan to put down Riel's rebellion, and in 1899-1902, when about 7,000 volunteers were raised for service in South Africa. Furthermore, there were in fact no Canadian regulars until 1871, when a "Permanent Force" of two batteries of artillery was organized. As late as 1908 the actual strength of this Permanent Force amounted to only 2,730 men. The story of "Canada's Soldiers," at least in modern times, is therefore almost entirely the history of the Canadian Militia, its organization, development, and defense role. It is the story also of peacetime plans and policies shaped by Canada's

Imperial ties and directed towards defense against invasion from the United States.

All this—the development of the Militia system and the organization of defense in the century of peace before 1914—Professor Stanley has told with rare skill and perspicacity. Anyone familiar with the standard short surveys of American military history, in particular those of Upton, Ganot and Spaulding, will recognize how well Professor Stanley has succeeded.

In another respect—the coverage of the first two centuries—this volume is superior to any comparable work on American military history. Beginning with an excellent discussion of the importance of the terrain in shaping Canada's military history, the book traces the tangled story of early Indian relations and colonial wars. The description of operations in the colonial wars will no doubt satisfy the general reader, while the account of the organization and administration of Canada's defense forces during the French regime offers ample reward to the specialist.

Professor Stanley has anticipated, as any historian must, a measure of disagreement with his distribution of emphasis; but the short shrift given the period since 1914 is more than a mere matter of emphasis. To devote less than one-fifth of the text to the period of Canada's major military efforts, to give fifty per cent more space to the Fenian raids than to the Canadian participation in the First World War, is a basic distortion. There is more than a hint of reluctance to move beyond the old nineteenth century problem of defense against the United States. Certainly the growing awareness that little more need be done for the security of Canada's southern border did not mean that Canada's military history became less important.

There are nuggets to be found in Professor Stanley's account of the years from 1919 to 1939, but this chapter of the story is not the rich lode found earlier in the book. So interesting and informative is the account of the pre-1914 period that any shortcomings in other particulars can easily be ignored.

BYRON FAIRCHILD  
Alexandria, Virginia



## SHORT REVIEWS

The following books are among those received for review by *MILITARY AFFAIRS*. Space has not allowed a more detailed discussion of their value to our readers. The cooperation of their publishers is called to the attention of all those interested in this field. Since the book part of the Bibliography was unusually long in the last issue it will be omitted in this number.

DORNBUSCH, C. E.: *Histories of American Army Units, World War I and II and Korean Conflict*, with some earlier histories. Foreword by Major General Albert C. Smith, USA, Chief of Military History. (Washington: Department of the Army, Office of the Adjutant General, Special Services Division, Library and Service Club Branch, 1956. Pp. 310. \$1.10.)

An indispensable guide to the majority of published accounts in this field, compiled by the indefatigable member of the staff of the N. Y. Public Library whose interest has cost him many non-official hours. Recommended.

*The Air Officer's Guide*. Ninth Edition. (Harrisburg, Pa.: Military Service Publishing Co., 1956. Pp. 561. \$5.00.)

This is a completely new and revised standard compendium containing a wide-range of important information for the professional and personal guidance of Air Force Officers; highly useful for officers of all grades.

PIRENNE, HENRY: *A History of Europe From the Invasions to the XVI Century*; with a new introduction by Dr. Jan-Albert Goris. (New York: University Books, 1956. Pp. 624. \$7.50.)

An excellent offset printing edition of the 1938 English edition translated from the French of the 8th edition. Since one of the author's concepts, herein described, is that the "Middle Ages" began with the disappearance of commerce when the Mediterranean became a Moslem lake, it provides perspective for today as one of the great historical works in new dress.

HEFLIN, WOODFORD A., ed: *The United States Air Force Dictionary*. (Washington: Air University Press, 1956. Pp. 578. G.P.O. \$3.00.)

The aim is to supplement rather than dispose of other dictionaries. As the Air Force has its own

technology and special usage there was a decidedly felt need for a special dictionary devoted to its specialized terms. Slang has been given a relatively small place. Emphasis is placed on terms of purely military interest in the fields of aeronautics, aerodynamics, meteorology, electronics, atomic energy, supersonics, and the like. The editor, Dr. Heflin, studied at Oxford as a Rhodes Scholar, taking honors in English Language and Literature, and was associated in the production of other dictionaries of fame, such as Funk and Wagnalls, before joining the Air University faculty. A "must" for anyone interested in air matters.

KNORR, KLAUS: *The War Potential of Nations*. (Princeton: Princeton University Press, 1956. Pp. 310. \$5.00.)

This work, as many others do today, cuts across inter-disciplinary fields to arrive at its objective which is an examination of what constitute the components of "war potential," a term which is frequently used in the press, literature, lectures, and discussions without ever being properly defined and bounded. The author includes in the term not only economic and industrial but also administrative and morale components. In a word, war potential is the stuff from which military strength can be mobilized in time of war, or used as effective credit in the diplomatic negotiations attending a severe international crisis. This, then, is a useful tool volume for the student of military policy and international politics. Professor Knorr is Research Associate in the Center of International Studies at Princeton University.

GIBBS-SMITH, C. H. and BRADFORD, L. E.: *World Aircraft Recognition Manual*. (London; Putnam; New York: John de Graff, 1956. Pp. 269. \$3.50.)

Coated paper, clear illustrations and line drawings make this a most satisfactory volume for all possible interested users.

DE GRUNWALD, CONSTANTINE: *Peter the Great*, trans. from the French by Viola Garvin. (New York: Macmillan, 1956. Pp. 224, illus. \$4.50.)

Designed as an introduction to this important figure it is satisfactorily entertaining, but lacks footnotes and bibliography for the serious student.

CLARK, MRS. MARK: *Captain's Bride, General's Lady*. (New York: McGraw Hill, 1956. Pp. 278. \$3.95.)

A very enjoyable autobiography of army life providing depth for future biographies of the General.

KINROSS, LORD: *Europa Minor*, Journeys in coastal Turkey. (New York: William Morrow, 1956. Pp. 167, illus. \$4.00.)

Views of an historically rich land are enjoyably shared in this volume designed for the arm chair traveler.

UNITED NATIONS: *Everyman's United Nation*, 5th edition (New York: United Nations Department of Public Information, 1956. Pp. 444. \$1.50, through Columbia University Press.)

Truly an inexpensive "ready reference" to the structure, functions and work of the UN and its related agencies during the ten years ending December 31, 1955. Especially valuable for all who follow UN activities in this troubled world.

BERKEY, ANDREW S., ed: *The Challenge to American Life*. (New York: G. P. Putnam's, Sons, 1956. Pp. 126. \$2.75.)

The Director, Schwenkfelder Library, Pennsbury, Pa., has edited thoughtful essays on "Science and Industry," by Gaylord P. Harnwell, "Spiritual Man," by Ralph C. Hutchinson, "The Democratic Process," by James M. Burns, "Individual Freedom," by Henry S. Commanger and "World Peace," by Joseph E. Johnson.

VAN FLEET, JAMES A.: *Rail Transport and the Winning of Wars*. (Washington: Association of American Railroads, 1956. Pp. 71. apply)

General Fleet presents a brief account of the historical influence of railroads on the conduct of wars during the last century.

WHEELER-BENNETT, J. W.: *Three Episodes in the Life of Kaiser Wilhelm II*. (New York: Cambridge University Press, 1956. Pp. 27. 75c.)

The Leslie Stephen lecture given at Cambridge in November 1955, presenting the illuminating insights of the author of the profound study: *The German Army in Politics, 1918-1945*.

LEONARD, ELIZABETH J. and GOODMAN, JULIA CODY, edited by James W. Hoffman: *Buffalo Bill, King of the Old West*, biography of William F. Cody. (New York: Library Publishers, 1955. Pp. 320. \$3.95.)

Based upon the collaboration of his oldest sister who died in 1928 with Mrs. Leonard as well as

by the editor who continued further verification of data. The book is endorsed by the Cody family association.

SHABAD, THEODORE: *China's Changing Map*, a political and economic geography of the Chinese Peoples Republic. Maps by Vaughn S. Gray. (New York: Frederick A. Praeger, 1956. Pp. 295. \$7.50.)

A member of the New York Times foreign news desk and author of *A Geography of the U.S.S.R.* presents a comprehensive systematic arrangement of the effect of the revolution on China's geography and its industry, agriculture and transportation using communist sources almost entirely. Recommended.

YOUNG, ROLAND: *Congressional Politics in the Second World War*. (New York: Columbia University Press, 1956. Pp. 281. \$5.00.)

A thorough study of the functioning of Congress in wartime by the Professor of Economics, Northwestern University. Chapters VI, "Military Strategy and Alliances," and VIII, "A New Foreign Policy" are most pertinent for the military historian. Recommended.

BRANDON, WILLIAM: *The Men and the Mountain*, Fremont's Fourth Expedition. (New York: William Morrow, 1955. Pp. 337. \$5.00.)

An exciting narrative of Fremont's attempt to make a winter crossing of the Rocky Mountains at the end of 1848. A balanced study, based on documents, of a controversial epic defeat in western history. Recommended.

SETTLE, RAYMOND W. and MARY L.: *Saddles and Spurs*, saga of the pony express. (Harrisburg: Stackpole, 1955. Pp. 217. \$3.75.)

The authors of *Empire on Wheels* have written a short undocumented history with a bibliography of sources.

SMITH, M. BREWSTER and others: *Opinions and Personality*. (New York: John Wiley, 1956. Pp. 294. \$6.00.)

A psychological study of ten individuals concerning their opinion of Russia and Communism in terms of problems of opinion research for the specialist.

DONDO, MATHURIN: *The French Faust, Henri de Saint Simon*. (New York: Philosophical Library, 1955. Pp. 253. \$3.75.)

A documented biography.

EVERETT, ROBINSON O.: *Military Justice in the Armed Forces of the United States*. (Harrisburg: Military Service, 1956. Pp. 338. \$5.00.)



A former commissioner of the U. S. Court of Military Appeals has prepared a brief textbook on Modern Military Law for all concerned.

CANADIAN HISTORICAL ASSOCIATION BOOKLETS (No. 5), A. L. BURT, *Guy Carleton, Lord Dorchester, 1724-1808*, Rev. Ver., 1955. Pp. 16.  
(No. 6), W. S. MACNATT, *The Making of the Maritime Province, 1713-1784*. Pp. 20.  
(No. 7), F. H. SOWARD, *The Department of External Affairs and Canadian Autonomy, 1899-1939*. 1956. Pp. 18.

Ottawa: The Association. 25c each. Admirable monographs.

MASSEY, H. S. W.: *Atoms and Energy*. (New York: Philosophical Library, 1956. Pp. 174. \$4.75.)

A non-technical account by a British Atomic Scientist.

PREVEDEN, FRANCIS R.: *A History of the Croatian People*, Volume I, Prehistory and Early Period until 1397 A.D. (New York: Philosophical Library, 1956. Pp. 134. 64 plates. \$7.50.)

An undocumented history with many illustrations providing an introduction to the region for non-croatian readers.

SMITH, C. JAY, JR.: *The Russian Struggle for Power: 1914-1917*, a study of Russian foreign policy during the first world war. (New York: Philosophical Library, 1956. Pp. 553. \$4.75.)

A study based upon Russian diplomatic documents published by the Soviet Government by an assistant professor of history, University of Georgia.

ANDERSON, JOHN Q., ed.: *Brokenburn: The Journal of Kate Stone, 1861-1868*. (Baton Rouge: Louisiana State University Press, 1955. Pp. 378, xxii. \$4.95.)

"Brokenburn" is the fascinating journal of Kate Stone, a young Southern girl, at her family plantation in Northeastern Louisiana, in the interior of Louisiana, and finally in Texas, giving an interesting picture of a cross-section of life in the Southwest of 1861-1868 and it will undoubtedly be one of the more frequently quoted works for Confederate historians from now on. (R.W.D.)

BALDWIN, HANSON W.: *Sea Fights and Shipwrecks: True Tales of the Seven Seas*. (Garden City, N. Y.: Hanover House, 1955. Pp. 310. \$3.95.)

Here is a mixed bag by the quick typewriter of Hanson W. Baldwin of the *New York Times*. There are 18 economical sketches of violence at

sea between 1816 and 1945; all are good and some are better.

BLOND, GEORGES: *Death of Hitler's Germany*, tr. by Frances Frendye. (New York: Macmillan, 1954. Pp. 302. Maps. \$4.50.)

A readable account of value for those who do not have time for the more thorough documented studies as Wheeler-Bennett's *Nemesis of Power*.

BRITISH FOREIGN POLICY: some relevant documents, January 1950-April 1955. (New York & London: Royal Institute of International Affairs, 1955. Pp. 127. \$1.50.)

A most valuable inexpensive tool for the historian concerned with American participation in world wide alliances which provides copies of major related treaties from Anzus to Baghdad in convenient form.

KIRKPATRICK, EVRON, ed: *Target the World; communist propaganda activities in 1955*. (New York: Macmillan, 1956. Pp. 362. \$5.00.)

An excellent compilation of available data similar to the earlier *World wide Communist propaganda activities*, ed. by Evans for 1954. Valuable especially for students of psychological warfare.

BROPHY, ARNOLD: *The Air Force*. (New York: Gilbert Press, 1956. Pp. 362. \$5.00.)

Subtitled, "A Panorama of the Nation's Youngest Service," it provides a brief undocumented information, designed for the general public on the Air Forces' Activities.

LOCKHART, SIR ROBERT BRUCE: *Your England*. (New York: Putnam, 1956. Pp. 303, \$4.00.)

English national characteristics are seen by the well known Scotch author of *Memoirs of a British Agent* from before World War I through World War II in this entertaining volume. Many brief illuminating comments, as for example, those on the Imperial Defence College pp. 232-33, provide a few nuggets of information for the military historian.

POPPER, MONICA: *A Bibliography of the Works in English of Arnold Toynbee, 1910-1954*. (New York: London: Royal Institute of International Affairs, 1955. Pp. 59. \$1.00.)

The student of history and international relations will find this a most valuable guide to this prolific scholar.

SEAMAN, L. C. B.: *From Vienna to Versailles*. (New York: Coward-McCann, 1956. Pp. 216. \$3.50.)

An extremely stimulating analysis of the history and international relations of Nineteenth Century Europe. It is a MUST book for the military

historian of the period since the author's reappraisal of accepted judgments of events is most thought-provoking.

**THE OFFICER'S GUIDE:** (Harrisburg: Military Service Publishing Company, 1956. Pp. 545. \$5.00.)

This is the 22nd edition of this standard work revised to January 1956.

**MEYER, JEROME S.:** *World Book of Great Inventions.* (Cleveland and New York: World Publishing Company, 1956. Pp. 270. \$3.95.)

A clearly written illustrated introduction of value to all ages.

**SETH, RONALD:** *The Undaunted*, the story of resistance in Western Europe. (New York: Philosophical Library, 1956. Pp. 327. illus. \$6.00.)

An undocumented narrative history by an author who has written several other volumes in the field. Has seven pages of bibliography and an index.

**TANNENBAUM, FRANK:** *The American Tradition in Foreign Policy.* (Norman: University of Oklahoma Press, 1955. Pp. 168. \$3.50.)

Tannenbaum's defense of the so-called humanitarian and pacific traditions against what he charges to be an effort to maneuver the United States into the adaptation of the doctrine of power politics and Machiavellian concepts is a skillful effort and almost convincing; but perhaps this book will remind many readers as it did the reviewer—Pollyanna's interpretation of world crisis.

**TOKAEV, G. A.:** *Soviet Imperialism.* (New York: Philosophical Library, 1956. Pp. 73. \$2.75.)

Colonel G. A. Tokaev of the Soviet Air Force was an important defector to the West in 1948. At that time he was serving in Berlin as the Soviet expert on exploiting jet and rocket spoils of war in defeated Germany. This volume is basically an epitome and also makes available certain material previously published in British magazines such as *Flight* and *The Economist*. It covers general Soviet strategy, the background of the Soviet Air Forces, Navy and Army, including weapons development and officer education, and concludes with a terse assessment of the power of the Soviets.

**KUTER, GENERAL LAURENCE S., USAF:** *Airman at Yalta.* (New York: Duell, Sloan and Pearce, 1955. Pp. 180. \$3.00.)

This volume provides further documentation on the crucial Yalta Conference in February 1945. Due to "Hap" Arnold's heart attack, Major Gen-

eral Kuter (now a four star general) was placed in the position of being a comparatively junior officer among the top-ranking military and civilian leaders of the Allies.

The general problem of personal contact and negotiation with the Russians is discussed. In particular, the Russian request for more American aircraft and the American desire for Siberian air-bases to be used in carrying out the air offensive against Japan are discussed in some detail. Based upon his personal and professional diary, General Kuter's volume also sets forth many interesting anecdotes as well as commentary on the preparatory American and Anglo-American conferences at Marseilles and Malta.

**BRADLEY, LT. COL. FRANCIS X., and LT. COL. H. GLEN WOODS** *Paratrooper.* (Harrisburg, Pa.: Military Service Publishing Co., 1956. Pp. un. \$3.50.)

This pictorial volume presents a complete review of the training, combat, and glory of paratroops. An appendix contains physical fitness tests and a jump record log.

**CHUNG, KYUNG CHO,** *Korea Tomorrow: Land of the Morning Calm*, with a prefatory note by General Mark W. Clark and a foreword by Dr. Paul F. Douglass. (New York: The Macmillan Co., 1956. \$5.95.)

This is a balanced one-volume survey of Korea from its earliest times to the present day, written by Professor Chung of the Army Language School, Monterey, California. *Korea Tomorrow* is superbly organized for basic reading and reference and is well supplemented by maps, statistics, charts, photographs and bibliography. Well written and comprehensive, this volume will be of continued usefulness as a reference text for students of military and international affairs, even though some material is relatively old.

**DUKE, NEVILLE and EDWARD LANCHBERY:** *'Sound Barrier'; The Story of High-Speed Flight*, 6th ed. (New York: Philosophical Library, 1955. 4.75.)

A British examination of the history and evolution of high-speed flying with a brief personal speculation on future developments.

**POOL, ITHIEL DE SOLA:** *Satellite Generals*, studies of military elites in the Soviet sphere. (Stanford: Stanford University Press, 1955. Pp. 165. \$1.75.)

One of the Hoover Institute Studies of Elites, available in 1951-52 on four European and Chinese Army leaders. Even though it is somewhat



out of date, military historians will find it a pertinent compilation.

HEYMAN, FREDERICK G.: *John Ziska and the Hussite Revolution*. (Princeton: Princeton University Press, 1955. Pp. 521. Ill., maps. \$9.00.)

An excellent study of the military and political events occurring during Ziska's life by a European scholar.

FRISCHAUER, WILLI and JACKSON, ROBERT: *The Altmark Affair*. (New York: Macmillan, 1955. Pp. 255. \$3.75.) (Eng. title *The Navy's Here*.)

A readable, accurate journalist's account of the adventures of the tanker supply ship for the *Graf Spee*. Recommended.

FLORINSKY, MICHAEL T.: *Integrated Europe?* (New York: Macmillan, 1955. Pp. 182. \$3.50.)

A provocative discussion of this highly controversial problem, ch. III "Military Integrator" being most pertinent for MILITARY AFFAIRS readers. Recommended for the student.

WALLACE, EDWARD S.: *The Great Reconnaissance*. (Boston: Little Brown, 1955. Pp. 288. \$5.00.) (Soldiers, artists and scientists on the frontier, 1848-1861.)

A popularly written exciting and authentic story, with bibliographies for each chapter which encourage further reading for those who need an introduction to this period. Recommended.

HOLLON, W. EUGENE: *Beyond the Cross Timbers*, the Travels of Randolph B. Marcy, 1812-1887. (Norman, Okla.: University of Oklahoma Press, 1955. Pp. 270. \$4.00.)

A scholarly and lucid volume based upon personal papers and documents, by an University of Oklahoma historian, which is a permanent contribution to the study of the military explorers and their great influence in opening the trans-Mississippi west.

DREYER, ADMIRAL SIR FREDERIC: *The Sea Heritage. A Study of Maritime Warfare*. (London: Museum Press, 1955. \$4.20.)

This work with such an impressive title is in fact a rambling autobiography of a British Naval Officer who was Jellicoe's Flag Captain in the *Iron Duke* in World War I, a Commander-in-Chief between the wars, and a Convoy Commander in World War II. The oft-told tale of the Battle of Jutland is again retold. Except for an insight into the workings of the British Admiralty the book does not seem to have too much value. It certainly is not easy reading. (J.D.H.)

## GOVERNMENT DOCUMENTS

U. S. 84th Congress, 2nd session. House Committee on Un-American Activities.

SOVIET TOTAL WAR, "Historic Mission" of violence and deceit. Washington, G.P.O. 1956. Pp. 898. Vol. I, \$1.25; Vol. II, \$1.50.

This valuable symposium of 120 civilian and military specialists' essays on all aspects of the communist threat provide a wealth of material for all those who are concerned with its study as well as for all military historians.

*The communist conspiracy, strategy and tactics of Communism Part I, communism outside the United States; foreword, General Introduction, Section A. Marxist classics; Pp. 202; Section B: The USSR, Pp. 528; Section C: The World Congresses of the Communist International, Pp. 372; Communist activities around the world, Pp. 553; Section E: The Comintern and the USA, Pp. 343. Washington G.P.O., 1956. \$5.60 set (House Reports #2240-2244).*

An invaluable collection of source materials collected for ready reference under the direction of chairman Walter which will provide pertinent data for the student who needs to understand what such doctrine teaches in order that its fallacies may be understood and the threat defeated.

THE GREAT PRETENSE, *a symposium on anti-Stalinism and the 20th Congress of the Soviet Communist Party*, Washington G.P.O., 1956. Pp. 173. (House Report 2189.)

A collection of essays on the current situation following the 1956 Congress by experts on various aspects of this threat.

U. S. 84th Congress, Senate Committee on Armed Services. Subcommittee on the Air Force. STUDY OF AIR POWER, hearings April 16-July 19, 1956. Washington, G.P.O., 1956. Pp. 1863, 23 parts in 2 volumes.

Senator Symington's subcommittee heard testimony on all phases of air power by military and civilian leaders and thus provides a valuable source for future students.

U. S. 84th Congress, 2nd session. House. *The Powers of the President as commander in chief of the Army and Navy of the United States*. Prepared at the request of House majority leader McCormack by Dorothy Schaffter and Dorothy M. Mathews of the Legislative reference service, Library of Congress. Washington, G.P.O., 1956. Pp. 145. (House document, No. 443.)

Sixty-one selections covering events of the last twenty years and a chronology, 1789-1955 have been carefully provided.

U. S. 84TH CONGRESS, 2nd session. Senate Committee on Foreign Relations sub-committee in Disarmament.

DISARMAMENT AND SECURITY, a collection of documents, 1919-1955. Washington, G.P.O., Pp. 1035. (Senate committee print.)

Prepared by Mrs. Shephard, Legislative Reference Division, Library of Congress under the chairmanship of Senator Humphrey. It comprises 239 documents in full text or in excerpt relating to I Disarmament, 1919-1955, II Problems of Disarmament and Security, and III Related Action in Congress, including a 23 page bibliography. An invaluable tool for military historians. There are also related hearings and reports.

### FICTION

JAMES, H. STREET: *Captain Little Axe*. (Philadelphia: Lippencott, 1956. Pp. 377. \$3.95.)

The wartime *Collier's* short stories of the adventures of the teen-age confederate captain and his "cradle company" from Shiloh to Chickamauga have been expanded by Don Tracy in the late author's original spirit to establish a character which will live in the field of Civil War fiction. Recommended.

KANTOR, McKINLEY: *Andersonville*. (Cleveland and New York: World Publishing Company, 1955. Pp. 767. \$5.00.)

This giant Pulitzer Prize novel of 1956 and Book of the Month Club selection of November 1955 has been thoroughly reviewed by now and has stirred up considerable controversy. The latest being in the *Chicago Tribune* "Magazine of Books" issues of August 26th and September 9, 1956. It is, of course, recommended for reading as it will have a permanent place in American historical fiction.

BOURNE, PETER: *When God Slept*. (New York: Putnam, 1956. Pp. 382. \$4.50.)

A readable novel laid mostly in twelfth century Cambodia. The early chapters clearly describe a contemporary siege in which the hero takes part prior to his journeys, which is the most valuable military part of the novel.

MAUGHAN, A. M.: *Harry of Monmouth*. (New York: William Sloane Associates, 1956. Pp. 440. \$4.50.)

An historical novel-biography of Henry V

which includes a description in detail of the route taken in 1415 as shown at the end papers leading up to the battle of Agincourt which may favorably compare with Kerr's articles, "The English Soldier in the Campaign of Agincourt" in the 1940 *Journal*. Recommended.

JUDAH, CHARLES B.: *Christopher Humble*. (New York: Morrow, 1956. Pp. 320. \$3.75.)

Charles II's London and Virginia; Bacon's campaigns against the Susquehannocks and Titus Oakes plot are background for this interesting story.

BEVERLY-GIDDINGS, A. R.: *The Rival Shores*. (New York: Morrow, 1956. Pp. 320 \$3.50.)

The Eastern Shore of Maryland from 1774 to early 1776 is affectionately portrayed in this good historical romance based on history in its story of the hero's efforts to aid Loyalists return to England.

TAYLOR, DAVID: *Farewell to Valley Forge*. (Philadelphia: J. P. Lippencott, 1955. Pp. 378. Maps. \$3.75.)

Life in and around Philadelphia in 1778 is graphically seen as background for the adventures of the hero and heroine as spies for Washington. As in his earlier *Lights Across the Delaware*, the author has written a solid novel worthy to be added to the list of permanently valuable novels relating to the American Revolution. The sketch maps show the battles of "Banner Hill" and "Monmouth" as described in the text and the spirit of the times is clearly portrayed. Recommended.

CARSE, ROBERT: *Great Circle*. (New York: Scribner, 1956. Pp. 243. \$3.50.)

A competent novel clearly describing 1840 whaling life for the marine historian.

KLAS, JOE: *Maybe I'm Dead*. (New York: Macmillan, 1955. Pp. 408. \$4.50.)

This is the outstanding American P.O.W. novel to yet appear. It is a first novel by a former A.A.F. fighter pilot who flew with the R.A.F. and was for twenty-five months a prisoner of war of the Germans. Most of the other American airmen who were shot down during the air war in Europe will find it re-erects all too well this personal war of a P.O.W. Man is the hero of this story of one of the great marches in history, a march made in forty degrees below zero by ten thousand American airmen during the closing months of the war. The book is accurate in historical detail and forceful in literary style.



SALTER, JAMES: *The Hunters*. (New York: Harper and Brothers, 1956. Pp. 244. \$3.00.)

One of the outstanding recent novels in the mushrooming crop of air literature, *The Hunters* is a fascinating account of the MIG Alley Campaign over the Yalu River in the Korean War. Exceedingly realistic in technical and human detail, its literary excellence likewise places it high on the reading list of students of recent military history.

TREVOR, ELLESTON: *Squadron Airborne*. (New York: Macmillan, 1956. Pp. 249. \$3.50.)

A Royal Air Force fighter station during the crucial phase of the Battle of Britain is the setting for this novel by a former British airman. Spitfire pilots and ground crews are the leading characters of this warm human story told with accuracy of detail.

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## HEADQUARTERS GAZETTE

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### TWENTY YEARS AFTER

#### ANNUAL REPORT OF THE EDITOR\*

The title of this report reminds you, quite correctly, of the sequel to Alexander Dumas' *Three Musketeers*. It is intended to dramatize the fact that as of today we are completing the 20th year of publication of *Military Affairs*. The material for our fourth and last number for this year has gone to the printer. This is a gratifying milestone. The woods are full of once-respected publications which have bit the dust ere the 20th birthday. In view of the difficulties that have beset us from time to time, it is a source of pride that we have never resorted to telescoped volumes but, rather, we can show four quarterly issues for each of those twenty years, or a total of eighty numbers. We have thus amassed published military history literature to the tune of some five thousand pages!

How long we shall be enabled to continue, of course, is always in the "lap of the gods." The first publication of any kind of the American Military History Foundation (the original name of our Institute) was a series of three articles on military history appearing in *Army Ordnance* (January-February 1935) through the kind cooperation of Colo-

nel Leo A. Codd, its managing editor. But the first periodical publication, the *Journal of the American Military History Foundation*, saw the light of day on 1 April 1937. The early issues were beautifully done on a fine grade of paper and bear the marks of Fred Todd's artistic pen and ink sketching. In 1938, Harvey DeWeerd, then a professor at Denison University, took over the editorship and labored hard for five years to produce a worthy periodical. Also in November 1938, the Trustees changed the name of the organization to the American Military Institute, and the magazine was rechristened the *Journal of the American Military Institute*. Two years later, during the early years of the Second World War, when Jesse Douglas and Dallas Irvine capably managed the Institute, the publication was renamed *Military Affairs*. Under this name which it has now borne for three quarters of its existence, the publication has become well and favorably known in academic, military, and lay circles in this country and abroad, though not by as many people as we would like.

Throughout the war period *Military Affairs* received friendly guidance from Dr. Irvine and was successively edited by Jesse S. Douglas, Edward G. Campbell, and Stuart Portner. I served under these men as associate editor, but my personal interest harks back to 1939, when my beloved chief and instructor in military science and tactics, Colonel Robert Arthur, then Chief of the Historical Section of the Army War College, was made a member of the Board of Trustees.

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\*This paper was read by the editor, Captain V. Gondos, at the annual membership meeting of the American Military Institute, held at the National Archives, Washington, D. C., 12 December 1956. The membership present, by unanimous vote, directed its publication in *Military Affairs*. In view of the imminent completion of the 20th volume, this report was devoted to a brief sketch of the journal's two decades, with particular emphasis on recent years. For a scholarly study of the earlier history of the Institute the reader is referred to the article by Major (later Lieutenant Colonel) Jesse S. Douglas, "Let History Arm the Mind," *Military Affairs*, VIII, (Spring 1944). 15-22.

With the termination of the Second World War began what may be termed The Slick Paper Period of the magazine. Inspired by the fertile imagination of the Institute's Provost, Dallas Irvine, who conceived the ambition of transforming the journal into a publication roughly comparable in formula, circulation, and educational effect to the *National Geographic Magazine*, the make-up of *Military Affairs* was radically altered. The text was printed on glossy paper stock, amply interlarded with skillfully chosen photographs, and the cover was in several colors modeled on that of *Time* magazine in mood and captions. This experiment lasted through 1946 and 1947, and was then abandoned because of the expense in money and editorial effort and also, possibly, because it did not "catch-on" with the journal's conservative consuming public conditioned to a more sedate scholarly format.

The following two years, 1948-49, may be labeled The Pentagon Period, when *Military Affairs* for the first and only time in its history was managed by a paid editor. The Office of the Chief of Military History detailed two successive editors to operate the journal. These two, Major Robert De T. Lawrence and Captain William Ross, returned the publication to its former characteristic format. But an economy wave in the War Department during the era of Secretary Louis Johnson, caused the suspension of the journal, after a dozen years of uninterrupted operation. The lack of an editor during 1949-50, resulted in a one year hiatus and the near ruination of the American Military Institute.

At that time General Eisenhower, then an Institute member in good standing, was president of Columbia University. It appears that members of the Board of Trustees of the Institute got his ear and entered into protracted negotiations with Columbia with

a view to assimilating the Institute and its journal with a new Institute on War and Peace to be established at the University. With Eisenhower's departure for NATO nothing came of this project which, at best, was a hard idea to swallow by a number of old-timers who felt that something didn't jell in the picture, especially as there were still financial assets available for publication.

Moribund for a year, the Institute and the journal were all but dead.

Then came the call, issued I believe under the aegis of the late Colonel Joseph I. Greene, to a general membership meeting of the Institute. Those who attended the ever-memorable night session of the membership, in the Pentagon auditorium, 3 November 1950, will never forget it. Probably there were more than a few who came prepared to utter the dreaded benediction, "*Requiescat en pace*, poor Yorick." Through the long hours of that evening, stretching well beyond midnight, the issue of life or death was fought out. But the challenge of Colonel Milton Skelly saved the day—the challenge to rally round the flag and keep it flying. He offered to serve as *ad interim* editor, provided a dozen good men and true would consent to serve as staff. Well over a dozen rushed to the colors. Working like a beaver, Skelly and his gang got things going again, but some seven months later he was detailed to a new post in Iran and at his behest I reluctantly agreed to assume the editorship in mid-year 1951.

Thus, as associate and as editor, I have now served the journal of the Institute for fully one half of its existence to date. I suppose my personal motivations in contributing this service are no different than those of the preceding and present staffs, namely, the satisfaction of creating something that seems worthwhile, and, even more so, the pleasure of association with good fellows of



a like mind. Let us never underestimate two things: the Idea, and the Fellowship. Fellowship is born of the Idea, and the momentum of Fellowship carries the Idea to fruition.

Of Skelly's group of sixteen volunteers we still have with us Bob Davis, Ralph Donnelly, George Stansfield, Foster Gleason, Howard Smyth, and myself, six in all. That's a fair survival rate. Unfortunately, Ralph has just fled south to join the Confederates, but, to balance matters, Howard has rejoined us after four years in England, where, with British and French colleagues, he helped edit the seized German diplomatic documents.

As we all know, between 1951 and 1953 we succeeded in publishing all the quarterly issues for the lost year, and also brought the magazine up to date and have kept it there ever since. Our paid membership and subscriptions which, in 1950, had sunk as low as that of the first year of the journal, about 150, are now in the neighborhood of 1,200. For a scholarly journal this is no mean gain. Although in recent years of mounting costs our operating fund has never exceeded four thousand dollars we succeeded in living within our income. Assuming for the past twenty years an average yearly cash cost of the journal of some \$2,500 (today it is nearly \$4,000), it is obvious that we have expended over \$50,000 in the publication of the magazine. All this was from memberships and subscriptions. It is safe to say that the capitalization of voluntary, unpaid editorial- and business-staff time is at least as much. Thus we forge toward the first quarter century mark with an investment behind us of well over \$100,000.

During the current year of 1956 we are publishing four issues of 64 pages each for a total of 256 pages. This is the first year since we recommenced the publication of the

Journal in December 1950, that we have had both the funds and the manuscript materials to produce four 64-page numbers. We are pleased to have achieved that modest goal as we have long had it in view. The year before, through the efforts of Foster Gleason, we were also enabled to reproduce the first 18 volumes on microfilm, the master negative of which is now deposited with the Library of Congress. This solves the problem of exhaustion of the stock of back issues, as reproductions are available to anyone, for a fee.

Unanimous agreement on the value of the contents is not to be expected. We believe, however, that for this year as well as past years the contents exhibit a gratifying variety of relevant topics, usually displaying competent historical scholarship and good narrative form. It is never easy to keep a balance between the various periods and the several arms, but we endeavor to do so. For example, admittedly we were short of air history representation but, through the efforts of Vice President Dale Smith and Trustee Eugene Emme, our recent issues have carried competent articles on aspects of early Air Force history, and we expect to have more in due course. The Military Library feature, in the dedicated hands of George Stansfield, has continued without interruption its unique contribution. In the Headquarters Gazette feature we attempt to give newsworthy items about the AMI, its members and meetings, and related professional matters of interest. Sources for news are not as varied nor as prolific as we would like to have them, but we are often pressed for space for the items we do get.

Naturally, in common with most people, we are never without problems. Our most immediate and serious problem is a prospective increase of about 30% in the cost of printing *Military Affairs*. Our printer ad-

vised us that with the coming of the new year he would have to raise our bill drastically, due to increases in labor and material costs. This matter was discussed at a full dress meeting of the Board of Trustees in August. The editor and officers of the Institute were clothed with authority to decide as they judged best.

We, that is the treasurer and the editor drove to Baltimore and had an all day conference with the printer, the upshot of which was that the only substantial saving we could make that would not reduce the content capacity from the present 64 pages was to reduce the format size by eliminating top, bottom, and side margins of the pages. This is not the time to bore you with details. Suffice it to say that our costs would rise less, say 100 dollars per issue, if instead of our present  $7\frac{1}{4}$ - x  $9\frac{3}{4}$ -inch format, which we have maintained for 20 years, we changed to a smaller  $6\frac{1}{8}$ - x  $9\frac{1}{8}$ -inch format. If we retain our traditional format, costs will go up about 400 dollars per issue.

In conclusion I wish to express the warmest appreciation for the work of the editorial staff and the business staff. It is obvious that without the input of an able and willing staff there would be no output.

At the risk of missing someone who should be publicly mentioned I wish to observe that our thanks are due to George Stansfield and his aides, Robert Davis and Mike O'Quin-

livan for their sterling work on the Military Library; to Paul Scheips for his varied activities on the mock-up, manuscript editing, proofing, and the like; to William Cooper Foote, F. W. Foster Gleason, and Ralph Donnelly for proof reading and other jobs; to John K. Mahon, Henry S. Merrick, Stefan Possony, and Francis O. Hough for reporting on manuscripts and attending meetings whenever they had an opportunity; to Rowland Gill and Jack Bauer for faithfully attending to the processing of memberships and subscriptions so we would continue to have the sinews of war; to N. J. Anthony for indexing the yearly volumes; to President John D. Hayes and Vice President Dale O. Smith for cheering us with their presence and moral support.

As a postscript permit me to remind you of words I used in connection with the 20th anniversary of the Institute three years ago: "... the two decades that have passed witnessed the growth of the Institute's journal into a mature, respected historical institution. Its distribution is worldwide. The sun never sets on *Military Affairs*. Our circulation extends to places as far apart as London and Indonesia, and our publication graces the shelves of hundreds of university, governmental, and institutional libraries. Our goal, we hope, shall ever remain as stated in our corporate seal, *Historia Mentem Armet*, Let History Arm the Mind."

#### ANNUAL MEETING OF THE AMI AND THE AHA IN ST. LOUIS

The annual meeting of the AMI and the American Historical Association was held at 2:30 p.m., Sunday, 30 December 1956, in the Ivory Room of the Sheraton-Jefferson Hotel in St. Louis, Missouri, before a group of some sixty persons. The program, arranged by Professor Richard C. Brown of the State University of New York College for Teachers, Buffalo, "Military History—

Pro and Con," consisted of a paper, "The Case for Military History and Research," by Professor Tyson Wilson, of the Virginia Military Institute"; an answering paper, "A Civilian Caveat," by Professor Arthur A. Ekirch, Jr., of The American University; and prepared comments by Professor William T. Hagan, North Texas State College, and Dr. Louis Morton, Deputy Chief, Of-



fice of the Chief of Military History, Department of the Army. These papers and comments it is expected will be published in a later issue of *Military Affairs*. Spirited remarks following the sharply differing views presented by the announced participants, substantially in support of the view that more attention should be given to military history in our schools, were made by representatives of the University of Manitoba, the Royal Military College of Canada, Yale University, St. Olaf College, Dickinson College, and the USAF Air Research and Development Command.

This correspondent, if he may be permitted some editorial remarks, inclines to the view that Professor Wilson's case for military history was not as pointed as it might have been and that Professor Ekirch while perhaps exaggerated in the case against military history said some things that in the interest of humanism we had better never forget. Professor Hagan's views were quite analytical and to the point, and Dr. Morton's, urbanely presented, were decidedly in defense of his chosen profession. While any historian worth his salt must admit that military affairs, as a part of our total experience, cannot be ignored in the writing and teaching of history, the military historian must admit that the main purpose of detailed study of military history in all its political, strategical, tactical, logistical, and administrative dimensions, is that of preparation for war. The causes of war, surely, are to be sought by social, intellectual, economic, political, and diplomatic historians as well as by military historians, and military historians might sometime be a little more realistic, thereby placing their function in

a truer perspective and better serving the unique profession that is theirs.

#### NEW LIFE MEMBER

Dr. Byron Fairchild, Office of the Chief of Military History, Department of the Army, and a former advisory member of the editorial staff of the journal, is the newest of the AMI's life members. Dr. Fairchild's interest in the Institute and its work is greatly appreciated.

#### AMI AND THE *Britannica*

To the list of AMI members writing on military subjects for the *Encyclopedia Britannica*, as given in our last issue, there should be added the name of Dr. John K. Mahon, a long-time member of our staff, who is now on the history faculty at the University of Florida in Gainesville. Dr. Mahon, a specialist on the history of the military, has prepared an article on this subject for the *Britannica*.

#### NEW TRUSTEES

At the annual membership meeting of the AMI, held at the National Archives, Washington, D. C., 12 December 1956, the following four persons were elected as trustees to fill expiring terms: Colonel Vincent Esposito, U. S. Military Academy, Major General U. S. Grant, III, whose name sufficiently identifies him; Dr. Tibor Kerekes, professor of modern history, Georgetown University; and Dr. William H. Russell, professor of history, U. S. Naval Academy. Mr. F. W. Foster Gleason and Dr. Stefan Possony were re-elected.

## EDITORIAL



### AN OPEN LETTER TO THE MEMBERSHIP

FELLOW Members and Friends: Starting with the first number of our next volume, Volume XXI, it may be necessary to reduce the *format* of *Military Affairs*, because of rising costs. We still hope this course can be avoided. The editorial and business staffs need your help. The traditional twenty years old format of the journal can be continued if we can quickly get several hundred additional members, or one or two large block subscriptions, or if an individual or a group would assure a thousand dollar per year guarantee for the next five years to cover a possible operating deficit.

It may not be necessary to use any of the guarantee or only a part of it, but its existence would assure the continuation of our regular size at least until the attainment of our twenty-fifth year — our silver anniversary.

Recent daily news has made all of you aware, I am sure, that long established periodicals and newspapers, some of which bore historic names known in every American household, have been done to death by rising labor and material costs.

In the current month of January 1957, the president of the American Newspaper Publishers Association protested a \$4 increase in the cost of paper; the J. M. Huber Corporation of New Jersey announced a 12 per cent price boost for printers ink; the Federal Trade Commission is checking the possibility of anti-trust action; and a joint survey of the newsprint industry by the American and Canadian governments has been urged. In the meantime a number of scholarly as well as popular magazines, led by *Collier's*, closed down, probably forever.

Fortunately, *Military Affairs* expects to keep the flag flying. But if each member would guarantee to enlist one additional member; or if a sponsor or a group would guarantee a modest reserve fund to cover a possible operating deficit, we can also guarantee to retain our present time-tested appearance as among the most readable of scholarly periodicals.

Paraphrasing the immortal Nelson, the AMI expects every votary to do his duty.

VG



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The aim of the American Military Institute is the encouragement of the serious study of all aspects of military (including naval and air) history. In the furtherance of this end the income from funds donated by Hilario Camino Moncado has been set aside to award biennially a cash prize for an original book-length manuscript in any field of United States military history. Manuscripts will be judged on the basis of thoroughness of research and quality of presentation as well as originality of contribution.

Inquiries regarding the competition for the award should be addressed to the Secretary of the American Military Institute.

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### INFORMATION FOR AUTHORS

Type manuscripts on one side of 8½ x 11 inch bond paper. Leave ample margins and double-space throughout, *including* footnotes and quotations to be set in reduced type. Footnotes should be double-spaced on sheets separate from the text and placed after the last page of the article. In matters of style and footnote citations the latest edition of Kate L. Turabian, *A Manual for Writers . . .* (Chicago: The University of Chicago Press) is to be followed. For points not covered adequately therein the latest edition of *A Manual of Style* (Chicago: The University of Chicago Press) should be consulted.

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The objects of the AMERICAN MILITARY INSTITUTE, as stated in its Certificate of Incorporation, are "to stimulate and advance the study of military history,

especially that of the United States; to diffuse knowledge thereof by publications, displays, and otherwise; and to acquire and preserve manuscripts, publications, relics, and other material relating thereto."

Persons who wish to become members are invited to submit their names to the Secretary, American Military Institute 1529 - 18th Street, N. W., Washington (6), D. C. Annual dues are \$3.50; life membership, \$50; benefactor, \$250; and patron, \$500. Institutions and organizations may subscribe to MILITARY AFFAIRS.

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